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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

JANUARY, 1964

VOLUME 61, NUMBER 1

Scientific Articles

SYSTEMIC LUPUS ERYTHEMATOSUS ASSOCIATED WITH PROCAINAMIDE THERAPY, Andrew L. Hahn, M.D., Springfield 19

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Special Article

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Helps to make the epileptic's life more meaningful

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WASHINGTON

King-Anderson Hearings—H.R. 3920

Hearings started Monday, November 18, before the House Ways and Means Committee on the King-Anderson bill and other legislative proposals involving medical-hospital care for the elderly. Originally scheduled to continue through Wednesday, November 27, the hearings were recessed due to the death of the late President Kennedy. Latest information indicates that Mr. Wilbur Mills, chairman, will reconvene the hearings sometime after January 1, 1964.

Health, Education and Welfare. Secretary Anthony J. Celebrezze was the first witness when the hearings convened and the secretary reiterated many of the old arguments for a national medical care program for the aged financed through the Social Security system. Mr. Mills challenged the HEW cost figure and, during the intensive questioning of Robert Myers, HEW Chief Actuary, obtained the admission that the HEW's proposed tax increase was about half as much as would be required to finance the program.

Senator Karl Mundt (R. S. D.), charged HEW with the obstruction of the implementation by the states of the Kerr-Mills law. The Senator also charged specific members of HEW with traveling at taxpayer's expense for the purpose of combating the success of Kerr-Mills.

American Medical Association. AMA President Edward R. Annis, M.D., and President-elect Norman A. Welch, M.D., presented the American Medical Association's formal testimony in opposition to the bill. The AMA statement, containing a wealth of statistics and other factual data, related that the King-Anderson bill was a deceivingly expensive, inadequate and unnecessary proposal. The testimony told how the Kerr-Mills law was providing an increasing amount of care for the aged among those who could not otherwise provide such care and that voluntary efforts were providing an ever-increasing array of health care coverage.

AMA testimony included the following references:

St. Louis, Cleveland, Buffalo. Studies by the Conference of Catholic Charities in three lower-middle-income parishes in these cities showed that between 80 per cent and 90 per cent of the aged had hospital insurance, savings or potential help from children in case of illness.

Church Projects. The Lutheran Church—Missouri Synod announced last June that 10 Lutheran projects for 748 living units for senior citizens had been constructed since 1961. In addition, federal mortgage insurance totalling more than $26 million had been approved or was in the process of being approved for 24 more housing projects identified as Lutheran which would provide 2,299 units for the elderly.

The Assemblies of God with headquarters in Springfield, Mo., cares for more than 2,400 persons in homes for the aged or nursing homes. Eighteen of these have been established since 1960.

MSMA Statement

Representative Durward Hall (R. Mo.), a physician and a member of the AMA House of Delegates, testified against the King-Anderson proposal Wednesday, November 20. In his presentation, he included a summary of the written statement filed by the Missouri State Medical Association. Copy of MSMA Statement is published in this issue of Missouri Medicine on page 30. Dr. Hall said that if federal programs such as housing, and aid to dependent children, did not require means test and everyone could use them regardless of income, "we would be practicing plain, unadulterated socialism."

Dr. Hall noted that he had asked a group of physicians in his district to assist him in the event he received any complaints from persons stating they were unable to receive medical care." "I have not yet had to refer a single letter."

St. Louis County Medical Society Statement

Written statement of the St. Louis County Medical Society was filed with the Ways and Means Committee in Washington, D. C., on November 21, 1963, in opposition to the King-Anderson bill. The statement reported on the "Past 65 Plan" sponsored by the society and put into effect in the latter part of 1960. "Physicians are taking steps to make certain that no one needing medical care goes without it because of inability to pay. Through an organized voluntary plan, St. Louis County doctors are only doing what doctors have always done—but now they are doing it a little more systematically."

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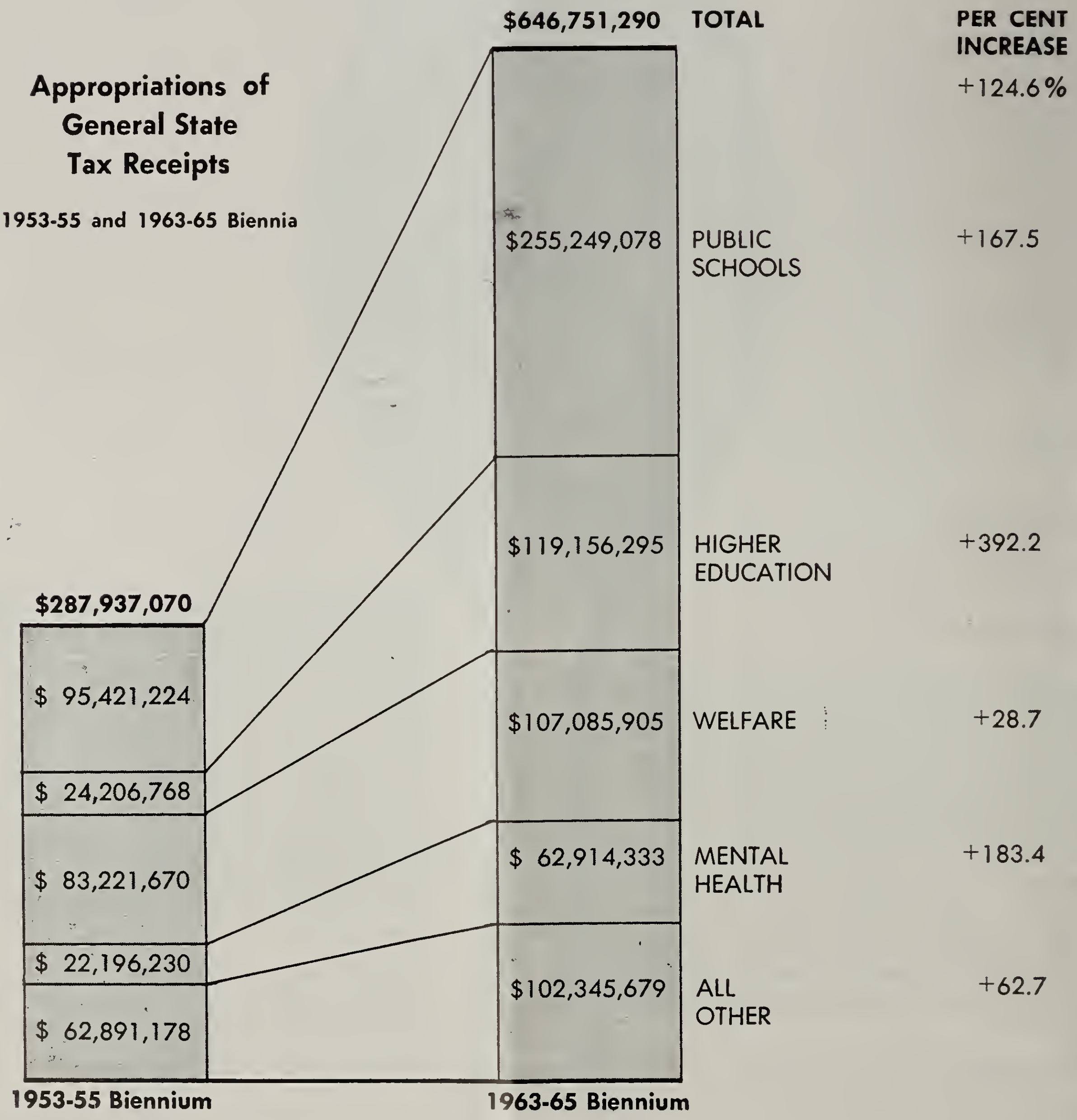
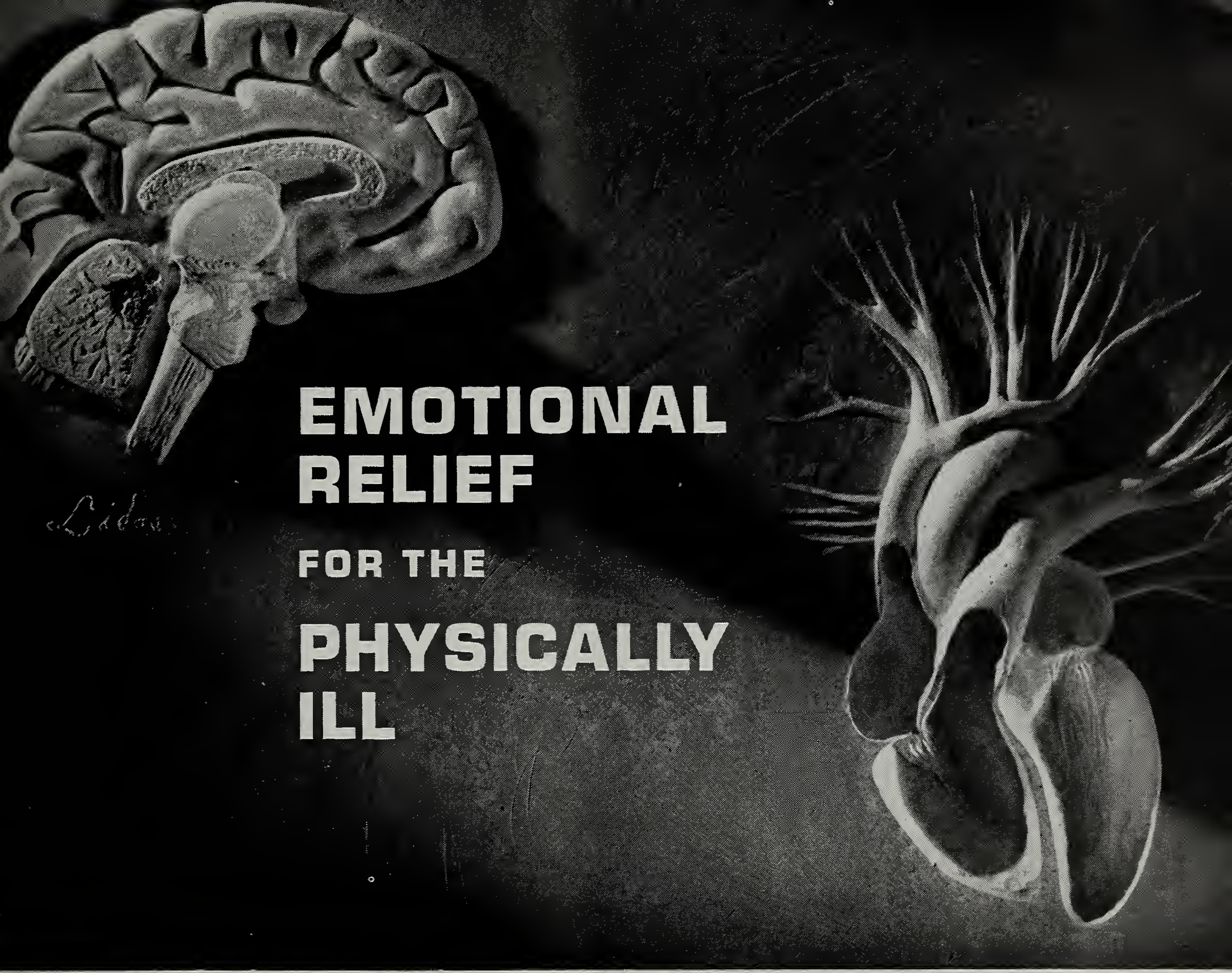
TEN-YEAR STATE SPENDING TREND—UP

According to the Missouri Public Expenditure Survey, Jefferson City, a comparison of state expenditures in 1953 and 1963 show that appropriations have about doubled in the last ten years.

Appropriations of General State Tax Receipts in the 1953-55 biennium are compared with the 1963-65 biennium in the chart.


Appropriations of General State Tax Receipts

1953-55 and 1963-65 Biennia



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Missouri Academy of General Practice

Committees for the ensuing year have been appointed by the President of the Missouri Academy of General Practice, Edson C. Carrier, Kansas City. The Committees follow:

Education: A. G. Karraker, Farmington, Chairman; William Rost, St. Joseph; Paul Roberts, Sweet Springs; Benjamin Eisenmann, New Haven; Lester Wolcott, Columbia; A. J. Graves, Mt. Vernon; Walter Stelmach, Kansas City; Charles Ladd, St. Louis; Wyeth Hamlin, Hannibal.

Hospital: Walter Gray, St. Louis, Chairman; John M. Haight, Kansas City; William O. L. Seabaugh, Cape Girardeau; Scott Benson, St. Joseph; Earl D. Russell, Springfield; Donald Shull, Jefferson City; Thomas Fischer, Hannibal.

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Medico-Legal: C. A. McBurney, Slater, Chairman; Kenneth Knabb, Springfield; Luke A. Knese, St. Louis; Lawrence Epple, Mexico; Herbert Rudi, St. Louis; Eugene Robichaux, Excelsior Springs.

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National Defense: Carl Siegel, Sedalia, Chairman; Foster Whitten, Carthage; B. A. Moranville, Columbia; Robert Kieber, St. Joseph; Merrill Gentry, Springfield; C. R. McAdam, St. Louis; Ivan Lloyd, Independence; John Walterscheid, Hannibal; Lyman D. Brown, Springfield.

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Public and Professional Relations: Edward Campbell, Cape Girardeau, Chairman; Vernon Wilson, Columbia; Arch Spelman, Smithville; B. J. Bass, Salem; Charles Worley, Sweet Springs; James Sweiger, Maysville.

Representative to AAGP Mental Health Commission: Cecil Leitch, Blue Springs.

Advisory: Roy W. Pearse, Nevada, Chairman; all past presidents, members.

MISSOURI STATE MEDICAL ASSOCIATION

106th Annual Session

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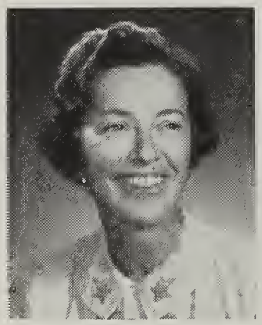
Woman's Auxiliary

In November, I visited St. Joseph and attended a luncheon meeting of the Buchanan County Auxiliary. They were working on their usual large donation to AMAERF, selling the writing paper and playing cards and that day sent five dollars to IHA in my honor. The next day, I went to Chillicothe for dinner with the members of the Grand River Society and Auxiliary. Afterward, the Auxiliary held their business meeting and we discussed the recent Fall Conference and this year's programs. The members are working on IHA in their own towns by collecting and shipping sample medicines. The following week, I went to New Orleans for the Southern Medical Association meeting. We are all very proud that one of our past presidents, Ruth Kelling, was installed as President-Elect of the Southern Auxiliary. Missouri was well represented and it was a pleasure to see so many friends.



Mrs. L. S. Crispell

Even though the doctors have extended lives with better care and drugs, there is a great need for knowledge of the proper care of senior citizens. The AMA's interest in the improvement of nursing home standards with proper accreditation is a step in the right direction, but the public needs to be informed and trained also. My mail has brought information on two approaches: Two hospitals in Illinois are giving eight weeks training to student nurses in rehabilitation of chronically ill patients. The girls spend time in practical clinic instruction in the daily care of older rehabilitation patients in the nursing home and attend clinical conferences giving them much-needed experience in the care of older patients. The National Society for Crippled Children and Adults has recently published a safety check-list available free to the public and especially designed for persons over 65 and their families. This publication attempts to make these persons aware of accidents which can occur in the home and offers help in avoiding them. Copies of the "Safety Check-list for the Aging and the Handicapped and Their Families" may be obtained from Easter Seal affiliates or the National Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago 12, Ill. Perhaps some of our auxiliaries would like to send for copies of the check-list and and use it in connection with a program on Safety or Rural Health.

At our recent state Fall Conference, our speaker, Mrs. Aaron Margulis, AMA Field Representative for Women's Organizations, mentioned many groups that have similar health programs and areas of interest with whom we might have a cooperative relationship. She has sent the list of these organizations to our officers and county presidents and I hope it will be of help to the various auxiliaries in planning programs with other groups in their communities.

In view of the tragic event in Dallas, we have no way of telling what the legislative picture will be in the coming months, but we would assume that in the near future regular business will be resumed and we will again be taking up where we left off. Certainly, there will be some changes in the coming months; let us hope that the free enterprise system that we are fighting for will prevail.

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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ANDREW L. HAHN, M.D., ***Springfield***

Systemic Lupus Erythematosus Associated With Procainamide Therapy

A recent report by Ladd[1] described a case of a syndrome indistinguishable from systemic lupus erythematosus, with strongly positive L.E.-cell preparation, occurring during therapy with procainamide hydrochloride. All of the symptoms subsided and the L.E.-cell preparation became negative after the drug was withdrawn. In the case to be presented induction of lupus by procainamide was suspected, but the relationship could not be proven because it was not possible to withdraw the drug. Ladd's report increases the likelihood that a relationship existed.

Case Report

The patient was first seen on September 16, 1957, at the age of 65, with severe chest pain due to massive acute posterior myocardial infarction. Forty-eight hours after admission he had a second bout of rather severe pain and went into shock; continuous intravenous norepinephrine administration was required for the next seven days. Quinidine was given prophylactically from the time of admission in a dose of 0.2 gram every six hours. On September 23, because of the appearance of basal rales, digitalis therapy was begun. A few hours after the initial dose of 0.8 mg. of digitoxin the patient developed atrial fibrillation. Since the ventricular rate was not abnormally rapid no vigorous effort to reestablish sinus rhythm was made immediately, but quinidine was increased to 0.2 gram every four hours. It was planned to attempt conversion to sinus rhythm when his general condition had improved. On September 29, however, without any change in therapy, he reverted to sinus rhythm. On October 17 atrial fibrillation recurred. Quinidine was increased to 0.4 gram every two hours and after the third dose sinus rhythm was reestablished. Thereafter convalesence was uneventful. He was dismissed on October 24, 1957, on digitoxin 0.15 mg. daily and quinidine sulfate 0.4 gram t.i.d., as well as dicumarol and phenobarbital.

A case is presented in which a syndrome indistinguishable from systemic lupus erythematosus and characterized by a strongly positive L.E. cell preparation occurred during procainamide hydrochloride therapy. It is the second such case to be described.

Dr. Hahn is with the Glenn-Turner-Webb Medical Clinic, Springfield.

He was readmitted on November 18, 1957. One week earlier he had had an episode of unconsciousness, occurring while sitting in a chair, lasting a few minutes. Since then he had had persistent postural dizziness, dyspnea and precordial distress; being an excessively stolid individual, he did nothing about this for a week. On admission he had ventricular tachycardia with a rate of 150. The patient and his wife were both definite in stating that he had been taking quinidine as instructed. This drug was therefore discontinued and he was started on procainamide (Pronestyl®) 0.5 gram every three hours. The following morning the ventricular tachycardia remained but the rate had slowed to 126. That evening he had a normal sinus rhythm, and procainamide was reduced to 0.25 gram every three hours. On November 24 the ventricular tachycardia recurred; increasing procainamide to 0.5 gram every three hours brought about conversion to sinus rhythm overnight. The maintenance dose was now increased to 0.5 gram every four hours, but on November 26 he again had ventricular tachycardia. Only when the maintenance does was continued at 0.5 gram of procainamide every three hours did the episodes cease to occur. On December 9 he complained of painful swelling of the left wrist; there was a minimal increase in local heat and the joint had a slightly bluish appearance. At first this was thought to be a hemarthrosis, but it subsided completely in five days. He was dismissed on December 18, 1957, feeling generally well. However, further transient episodes of ventricular tachycardia occurred at home and procainamide dosage was increased to 0.5 gram every two hours during the day and every three hours at night. On this dosage the episodes became quite rare and the only persistent arrhythmia was due to occasional ventricular premature contractions.

In late August 1958 he was hospitalized with acute pleurisy with a small effusion. He had been fishing on August 26 and became chilled in a cold wind. The next day he awoke with severe pleuritic left chest pain. On August 29, when he first sought attention, there was a small effusion in the left base. He had a recurrent episode of ventricular tachycardia on the day of admission. Laboratory studies showed a hemoglobin of 13.4 grams and white blood count of 7,400 with normal differential. The pain and effusion subsided within a week and he was dismissed.

In the following weeks he developed marked anorexia, weight loss, weakness and migratory joint pains. Erythrocyte sedimentation rate, which in May had been 8 mm. at 30 minutes and 14 mm. at one hour (Cutler), rose to 18 at 30 minutes and 22 at one hour. Serum protein determination showed an albumin of 3.12 and globulin of 4.58. He was hospitalized in October 1958 for further study. White blood count at that time was 3,000 with nine eosinophils, 49 segmented neutrophils, 39 lymphocytes, and seven monocytes. An L.E.-cell preparation was strongly positive, numerous typical cells being seen in every field. He had a mild anemia (hemoglobin 11.3 grams, hematocrit 34 volumes per cent) and an elevated indirect-reacting serum bilirubin (3.0 mg.) with normal direct-reacting bilirubin.

He was started on adrenal steroid in the form of triamcinalone, 64 mg. daily in divided doses, later tapered off to 16 mg. daily, and had prompt improvement in all respects; appetite and sense of well-being returned and joint pains disappeared. White blood count and differential, hemoglobin and bilirubin returned to normal. Procainamide was suspected of being a causative factor in his illness. Inasmuch as the first episode of tachycardia had occurred while he was on 1.2 grams of quinidine sulfate per day, it did not appear likely that this drug would control his arrthythmia. However, an attempt was made; procainamide was discontinued and quinidine reinstituted in a dose of 0.4 gram every three hours around the clock. Several days later he had an episode of ventricular tachycardia with rate of 150 and procainamide was restarted. The paroxysmal ventricular tachycardia was again well controlled.

On continued steroid administration all of the manifestations of lupus remained in abeyance except the sedimentation rate, which remained elevated. For a year and one half the patient did quite well, with no episodes of tachycardia, and his procainamide dose was gradually lowered to 0.5 gram five times daily. In April 1961 he had a severe episode of ventricular tachycardia with shock, sinus rhythm being restored with intravenous procainamide. Following this episode he remained rather weak, though up and about. In October 1961 he expired suddenly at his home. An autopsy was not obtained.

DISCUSSION

At the time this case was studied there had been no reported instance of procainamide-induced systemic lupus erythematosus. I consulted the research department of the company manufacturing the drug and was told that they knew of no such reaction to it. Since I was unable to observe the effects of discontinuing the drug, the suspected relationship of procainamide to the systemic lupus could not be further tested. Because of Ladd's subsequent report of a case wherein lupus was shown rather convincingly to result from procainamide therapy, it now appears highly probable that the lupus syndrome in the present case was likewise precipitated by procainamide.

SUMMARY

A case is presented in which a syndrome indistinguishable from systemic lupus erythematosus, and characterized by a strongly positive L.E.-cell preparation, occurred during procainamide hydrochloride therapy. This is the second such case to be reported.

ADDENDUM

Since this case report was submitted for publication an additional case has been observed. Miss D.M., a forty-nine year old female with paroxysmal atrial tachycardia, continued to have

(Continued on page 23)

WALTER R. STAFFORD, M.D., ***and***
STEPHEN F. BOWEN JR., M.D., ***St. Louis***

Blowout Fractures of the Floor of the Orbit

THE PURPOSE of this paper is to describe a condition which has been designated as "blowout fracture" of the orbital floor. This type of injury occurs more frequently than is generally assumed. On routine examination the diagnosis is often missed because the fracture is either masked by the extent of the facial injury, or not suspected. If possible, the diagnosis should be made and treatment started early, as the oculomotor imbalances resulting from the fracture are more difficult to correct if the tissue in the orbit has become scarred down.

MECHANISM OF INJURY

The contents of the orbit are protected by a strong bony rim composed of the supraorbital arch of the frontal bone superiorly, the frontal process of the maxilla medially, the zygoma and maxilla inferiorly and the zygoma laterally. In the posterior half of the orbital floor, immediately anterior to the inferior orbital fissure, is an area of rather thin bone (measuring only 0.5 mm. to 1.0 mm. in thickness). This area is weakened still more by the presence of the infraorbital canal. The shape of the orbit on cross section is that of a cone, and when the orbital contents are pushed backwards, as a result of trauma to the soft tissues of the anterior orbital area, there is a sudden rise in the intraorbital pressure. This increased internal pressure is transmitted to the walls of the orbit causing a "blowout" fracture of the weakest portion.

A case report and discussion of an injury that is often hard to detect.

Dr. Stafford, formerly Chief Resident in Ophthalmology at St. Louis University Hospitals, is now in the Ophthalmic Pathology Branch of the Armed Forces Institute of Pathology, Washington, D. C. Dr. Bowen is an Assistant in the Ophthalmology Department, St. Louis University, School of Medicine.

By its definition, and in its most typical form, the fracture involves only the floor and not the orbital rim, following trauma over the orbital contents anteriorly by a non-penetrating object, such a a fairly large ball or a human fist. The globe is capable of withstanding considerable pressure without rupture, although severe injuries due to a smaller object, such as a golf ball, often do produce a rupture of the globe.

CLINICAL DIAGNOSIS

The signs and symptoms of the blowout fracture are as follows:

(1) Varying degrees of ecchymosis, edema of the orbital region and subconjunctival hemorrhage.

(2) Diplopia, especially on upward gaze.

(3) Varying degrees of enophthalmos, of which the patient may not be aware.

(4) Hypoethesia, or anesthesia in the skin area of the cheek supplied by the infraorbital nerve.

(5) Inability of the patient to rotate the involved eye upward in the normal range.

(6) Although routine orbital roentgenographic studies may be equivocal or negative, the roentgenogram of the maxilla in the Water's view frequently shows a cloudy maxillary sinus (representing a hematoma), or a downward herniation of the orbital contents. A laminogram may more clearly delineate the herniation of the orbital contents.

(7) Traction applied directly to the inferior rectus muscle under anesthesia may demonstrate that the globe cannot be rotated upward, due to incarceration of the muscle in the fracture.[2]

CASE REPORT

The following case report is given as an example to demonstrate some of the difficulties in making the diagnosis of blowout fracture of the orbit.

A 16-year-old white male was seen in the emergency room on September 29, 1962, after being kicked in the region of the right eye during a football game four hours before admission. The patient noted moderate pain and diplopia immediately thereafter. Examination revealed the patient's vision to be right eye 20/15-1 and left eye 20/15-2. There was moderate ecchymosis and edema of the skin and subcutaneous tissue of the lids and periorbital tissue on the right. The conjunctivae, sclerae and corneae were not abnormal, save for moderate subconjuctival hemorrhage nasally and inferiorly in the right eye. The pupils measured right eye 3 mm. and left eye 5 mm.; however, they reacted equally and briskly to light and on accommodation directly and consensually. The extraocular muscles showed a full range of motion, but Maddox Rod examination and cover test revealed 15^{Δ} right hypertropia and 4^{Δ} right extropia. The diplopia increased on looking superiorly and the patient experienced pain on directing his gaze in this direction. There was a minimal enophthalmos; no area of dermal anesthesia or hypothesia could be delineated (fig. 1). Examination of the media and fundi and slit lamp examination revealed no abnormalities. The right maxillary sinus did not transilluminate well and roentgenographic studies showed a relative widening of the bony component of the lateral roof of the right maxillary antrum, although the remainder of the sinus was radiographically clear. No fracture site could be seen. The remainder of the physical examination and the laboratory studies revealed no other abnormalities.

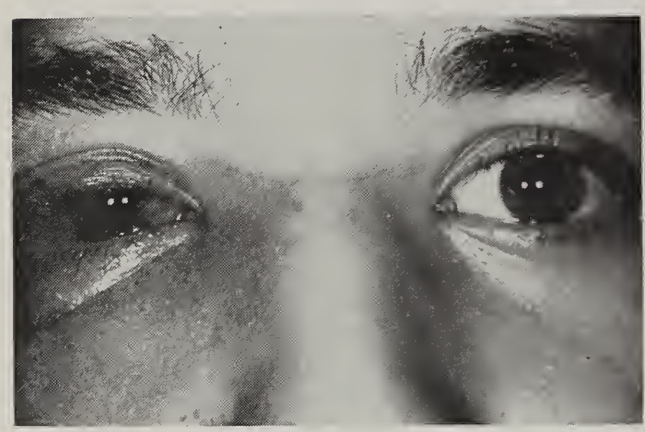

Fig. 1. Pre-operative appearance of patient. Note enophthalmos and position of corneal light reflex.

On October 1, 1962, under general anesthesia an exploration of the right maxillary sinus through a Caldwell-Luc approach (by Dr. W. B. Harkins of the Department of Otorhinolaryngology) and a right lateral anterior inferior orbitotomy were done, after traction on the inferior rectus muscle revealed no limitation of motion. The anterior maxillary sinus window was made approximately 1.5 cm. in diameter, the bone being removed in one piece with its periosteum intact, with the view of using this as a possible bone graft for the orbital floor. The sinus cavity was clear and mucous membrane lining intact; however, in the upper lateral portion of the sinus the mucous membrane bulged downward about 2 mm. in what appeared to be a hematoma formation. At the posterior end of this bulge and at the extreme posterior apex of the maxillary sinus, numerous small fragmented pieces of thin bone could be palpated. The lateral anterior inferior orbitotomy was then done; and the periosteum was separated from the bone of the orbital floor back to the posterior third of the orbit laterally where a small depression lateral to the infraorbital canal in the floor of the orbit could be felt. All orbital contents were lifted from the orbital floor to be sure that there was no incarceration of tissue in the fracture site. Since orbital contents were not herniated into the sinus cavity no bone graft was placed. The orbitotomy was closed in separate layers and the nasal antral wall of the right maxillary sinus was opened into the nose under the inferior turbinate, and the sinus cavity firmly packed with plain gauze with the tail brought out through the nasal antral opening into the nose.

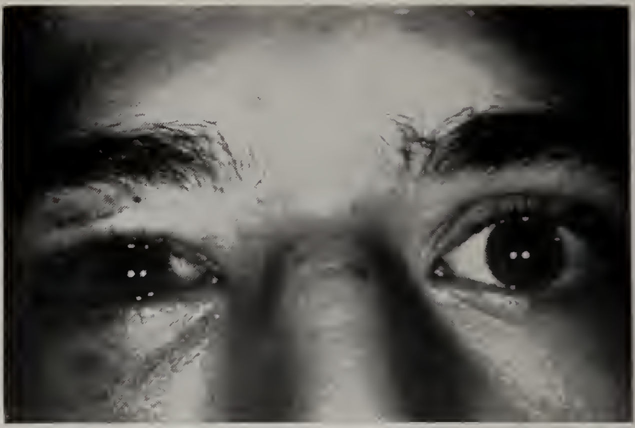

Fig. 2. Appearance of patient 24 hours after surgery. Compare enophthalmos and position of corneal light reflex with fig. 1.

At the first postoperative dressing change, 18 hours after the surgery, the patient had single binocular vision, and no tropia was demonstrable (fig. 2). The maxillary sinus pack was removed after 72 hours and the postoperative course was uneventful. The patient was discharged seven days after surgery with the single binocular vision, equal pupils, and no demonstrable tropia.

COMMENT

The most common site of the blowout fracture is in that portion of the orbital floor weakened by the infraorbital canal or groove. The inferior rectus muscle is situated immediately above the infraorbital canal on the undersurface of the orbital contents; the inferior oblique muscle arises from the orbital floor near the lateral margin of the lacrimal groove. The two muscles are intimately fused at the point where the inferior oblique crosses beneath the inferior rectus. It is easily seen, therefore, that these two muscles are frequently involved in the blowout fracture. The incarceration of the inferior rectus muscle in the fracture site restricts the rotation of the globe in the field of action of the superior rectus. If the fracture is located laterally to the infraorbital canal, the inferior oblique and inferior rectus muscles may not be involved at all. Schjedlerup feels that most of the diplopias are caused by adhesions or pinching of the orbital contents in the fracture lines.[5]

Injury to the motor nerves of the inferior oblique and inferior rectus muscles may also occur. Most commonly injured is the nerve to the inferior oblique muscle (a branch of the inferior division of the oculomotor nerve). This nerve courses along the lateral border of the inferior rectus muscle and enters the middle portion of the inferior oblique muscle. It is thus exposed to injury, while the relatively short course of the nerve to the inferior rectus muscle makes it less vulnerable to injury in the blowout fracture. Normal infraorbital nerve conduction indicates that the fracture site is either medial or lateral to the infraorbital canal.

The escape of orbital fat and orbital contents through the defect in the orbital floor is the cause of the enophthalmos.[1]

Surgical exploration of the orbital floor is indicated whenever the diagnosis is questionable, and should be made through a Caldwell-Luc approach in the canine fossa. The opening should be large enough to allow direct inspection and palpation of the orbital floor. If a fracture is found, the orbit should be entered and all orbital contents freed up from the fracture site. The extent of injury found at operation is usually much greater than the roentgenographic findings indicate.[1, 2] Several methods have been proposed for the treatment of blowout fractures of the orbit. Basically these consist of freeing the orbital contents from the fracture site, re-establishing the orbital floor and supporting it while the bone heals.[1, 2, 3, 4]

Summary

A blowout fracture of the floor of the orbit can be produced by external trauma to the front of the eye resulting in an increased intraorbital pressure herniating the orbital soft tissues through the weakest area of the orbital floor. Findings associated with such an injury are signs of acute trauma, diplopia on upward gaze, varying degrees of enophthalmos, hypoesthesia or anesthesia of the skin along the distribution of the infraorbital nerve, and limited upward rotation of the globe. Roentgenography, especially laminography, is helpful in the diagnosis, however the extent of injury is often greater than that shown by X-ray. A precise diagnosis is only established by exploration of the orbital floor by the Caldwell-Luc approach and inferior orbitotomy. The present methods of treatment are reviewed.

We feel, as do Cunningham and Marden,[2] that if the blowout fracture is diagnosed early before adhesions form, good results can often be obtained with reduction of the fracture and antral packing.

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SYSTEMIC LUPUS ERYTHEMATOSUS

(Continued from page 20)

episodes of tachycardia on digitalis and sedation. She could not tolerate even small doses of quinidine because of occurrence of nausea and vomiting. Procainamide was started on June 21, 1963 in a dosage of 250 mg. q.i.d. The episodes of tachycardia became less frequent and less prolonged but early in August she developed the following symptoms: Episodes of hives, with one or several urticarial lesions described as the size of the eraser on a lead pencil occurring two or three times daily on various areas of the body and lasting for a few minutes to an hour or more; stiffness in the neck, forearms, and hands; weakness of the hands noted when trying to wring out a wash rag; edema of the finger joints; moderate malaise. She had no chills or fever. Laboratory examination revealed the following: Blood sedimentation rate, which had been five at thirty minutes and eleven at one hour in January of 1963, was now twelve at thirty minutes and twenty at one hour. Hematocrit was stable. WBC had been 9,350 in November 1961 and was now 4,900 with 16 stabs, 59 segs, 22 lymphs, and 3 monocytes. L.E. cell preparation was positive. Procainamide was discontinued on August 9 and her symptoms gradually subsided over a period of about two weeks. In the following two weeks she had some occasional mild recurrence of joint stiffness or soreness and hives but since early September there has been no further recurrence of any of these symptoms. On September 5 her sedimentation rate was 5 at thirty minutes and 12 at one hour, WBC 5,700 with 5 stabs, 61 segs, 23 lymphs, 9 monocytes, and 2 eosinophils. Repeat L.E. cell preparation on September 17 was negative. Procainamide has not been readministered.

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Ovarian Metastases From Carcinoma Of the Colon

Metastasis from adenocarcinoma of the colon to one or both ovaries occurs in from 2 to 8 per cent of some reported surgical series. The bulky ovarian metastases frequently require a secondary palliative operation. This can be prevented by prophylactic castration at the time of the original colon resection. Three cases of this complication are presented which occurred during a period of one year. It is strongly recommended that oophorectomy be done in all postmenopausal female patients, and in those premenopausal patients who fulfill certain criteria.

The three authors are on the surgical service of St. Luke's Hospital, Kansas City, and Dr. Kennard is also on the surgical service of St. Mary's Hospital, Kansas City.

Our attention was focused upon the problem of ovarian metastases from carcinoma of the colon by the occurrence of this complication in three patients on our service within the period of one year. Two of these women presented with large pelvic tumors ten months and eight months, respectively, following the primary bowel resections. It seemed probable, in retrospect, that occult ovarian metastases represented the only spread of the disease at the time of the original operation. Of course, implantation caused by the manipulation of viscera at the time of surgery cannot be ruled out. In either case, the significant inference is that a secondary palliative operation might have been avoided had prophylactic castration been performed at the time of colon resection. It is even more chastening to consider the possibility that a long term survival or cure might have been achieved in the two patients whose ovarian tumors appeared later, since, at their second operations, both revealed no evidence of spread other than to ovaries. The peritoneal implants present in both cases seemed to be secondary to erosion through the ovarian tumor capsules.

Case Reports

Case 1. A 39 year old white female was admitted to St. Luke's Hospital April 11, 1961, with the chief complaint of increasing number of bowel movements, of a dark color, of several weeks' duration. Her past history included multiple operations; i.e., appendectomy in 1940; excision of benign breast tumor, 1947; cholecystectomy for gall stones, with synchronous excision of intraductal papilloma, left breast, 1959; and cystocele and rectocele repair in November 1960. A barium enema was done on this admission, revealing a constricting lesion of the recto-sigmoid colon. Biopsy confirmed the diagnosis of adenocarcinoma. At operation, April 17, 1961, anterior resection of the sigmoid colon, with primary anastomosis, was performed. The liver was free of metastasis. No specific note was made of the condition of the pelvic organs, but they were, presumably, grossly normal, since the surgery was in that field. The pathologist reported a Dukes' Stage C adenocarcinoma of the colon. Her postoperative course was complicated by small bowel obstruction due to adhesions, requiring a second laparotomy, from which she recovered uneventfully. She was dismissed from the hospital on May 10, 1961.

Her next admission, February 19, 1962, was for a chief complaint of abdominal distention of about two weeks' duration, accompanied by constipation. Examination revealed a large lower abdominal and pelvic mass extending to above the umbilicus. At laparotomy on February 21, bilateral ovarian carcinoma with peritoneal implants were found. There were no gross liver or omental metastases. A segment of ileum adherent to the tumor was resected also, and anastomosis performed; the pathologist reported adenocarcinoma of both ovaries. Following our experience with the next two cases to be described, the slides on this case were reviewed, and it was apparent that the tumor in the ovaries was identical histologically with that previously removed from the colon.

The postoperative course following this procedure was uneventful, but she was readmitted October 18, 1962, with intestinal obstruction. This did not respond to long tube decompression, so another laparotomy was undertaken on October 27, revealing pelvic carcinomatosis, involving the ileum. A diverting ileocolostomy was done. The postoperative course was complicated by "surgical mumps" of the submandibular salivary glands, fecal fistula, and finally death on December 17, 1962. Autopsy revealed no gross tumor mass in the pelvis, but diffuse peritoneal bowel implants, and a metastatic nodule in the lower lobe of the right lung. The liver was free of metastases.

Case 2. A 46 year old white female was admitted to St. Luke's Hospital August 19, 1962. She complained of pain in the right side of the upper abdomen, often worse after eating, and increasing fullness in the lower abdomen, of three to four weeks' duration. She attributed these symptoms to an automobile accident two months previously in which she had sustained mild trauma to the lower right chest and abdomen. A barium enema showed a constricting lesion in the right transverse colon, and pelvic examination disclosed huge pelvic tumors extending up to about the level of the umbilicus. The preoperative diagnosis of carcinoma of the transverse colon, with probable ovarian metastasis, was made. This was confirmed at laparotomy on August 23, 1962, at which time huge ovarian metastases with peritoneal implants were found and a constricting lesion of the transverse colon invading onto the serosa of the bowel wall. There were also two metastatic nodules in the right lobe of the liver. A wedge resection of the transverse colon bearing the tumor was accomplished and primary anastomosis done. Then a panhysterectomy was performed, removing the large ovarian masses and uterus. The pathologist reported a Dukes' Stage C adenocarcinoma of the colon with metastases to both ovaries and peritoneum. Her recovery from operation was uneventful, and this patient was alive and apparently in good health 11 months after the operation.

Case 3. A 50 year old white female was admitted to St. Luke's Hospital September 22, 1962, with the complaints of abdominal pain of about seven weeks' duration, constipation for one week, and vomiting for the preceding three days. Past history revealed appendectomy many years previously, uterine suspension with tubal ligation in 1940, and facial trauma from an automobile accident two years prior to this admission. She was treated by intravenous fluids, long intestinal tube and other supportive measures. Barium enema revealed an apparently complete obstruction of the colon at the splenic flexure. However, she was able to be decompressed, and the bowel prepared for primary resection and anastomosis, which was done on September 27, 1962. There were no palpable liver metastases, and the pelvis was normal to palpation. The pathologist reported Dukes' Stage C adenocarcinoma of the colon.

Her second admission, to St. Mary's Hospital, Kansas City, on May 23, 1963, was for complaints of lower abdominal fullness and feelings of pressure in the pelvis of several weeks' duration. Examination revealed a large mass arising in the pelvis and extending nearly to the umbilicus. Laparotomy was performed on May 24, finding huge ovarian tumors, eroding through their capsule and invading and implanting onto pelvic peritoneum. Bilateral salpingo-oophorectomy was done. Palpation of the liver revealed no metastases there, and the area of previous colon anastomosis appeared free of disease. Her postoperative course was uneventful. Radioactive gold was instilled intraperitoneally on the ninth postoperative day, and she was dismissed three days later. The follow-up on this patient is only two months at this writing, but the prognosis is, of course, considered poor.

In the medical literature of recent years there are numerous articles relating to clinical and experimental work on malignant neoplasms of the colon and rectum. The objective of these studies, explicit or implicit, is an ultimate improvement in long term survival rates. Yet, a majority of recognized authorities in this field make little or no mention of prophylactic oophorectomy in female patients as being a significant contribution toward this goal.[1-4] It was our impression, prior to our experience with the three cases reported, that ovarian metastasis from colon carcinoma was an extremely rare occurrence. This would seem to be confirmed by several statistical studies, of large series of cases, in which no mention is made of such a complication.[5-8]

On the other hand, a number of authors have reported experiences similar to ours, and consider this to be a problem worthy of serious consideration. Sherman, et al,[9] reported eight cases, of either concomitant or subsequent ovarian metastases in a series of 162 female patients undergoing resection of the colon or rectum, from 1953 to 1962, an incidence of 5 per cent, and urged consideration of prophylactic oophorectomy in such patients. Willis[10] recommends thorough examination of the ovaries before resection of any abdominal viscus for carcinoma. Burt,[11] in 1951, studied 17 patients with metastatic ovarian carcinoma from a series of 493 female patients undergoing resection of primary lesions in the colon and rectum, together with one additional private case. He concluded that all such patients over the age of 40 should have the benefit of prophylactic oophorectomy. In 1960, he[12] reiterated this position and stated that an additional 20 cases had been seen at the Presbyterian Hospital, New York, since 1949. Wheelock and Putong,[13] in studying 68 cases of cancer, metastatic to ovaries, found 26 of them were from primary carcinomas in the colon and rectum. And Abrams, et al[14] reported that in 118 consecutive autopsies of women dying of carcinoma of the colon, excluding the rectum, 16 presented with ovarian metastases, 13.6 per cent. Deddish and Stearns[15] reporting their experience with extended abdomino-pelvic lymph node dissection for carcinoma of the left colon and rectum, together with bilateral oophorectomy in all female patients, found 8 per cent of 63 women to have metastases in the ovaries.

And, finally, Rendleman and Gilchrist,[16] in 1959, reported encountering 11 cases of ovarian metastasis from cancer of the colon or rectum during the preceding 10 years. During the six year period prior to their report, they had followed specific criteria for performing bilateral oophorectomy at the time of colon resection. These criteria were: (1) one or both ovaries adherent to the tumor; (2) either, or both, ovaries grossly abnormal; (3) tumor invading the serosa of the bowel, or the presence of peritoneal implants; (4) all palliative resections, excepting the "frozen pelvis." Of 102 cases of carcinoma of the gastrointestinal tract in female patients, during these six years, 42 were found to fulfill these criteria. Of this number three or 2.9 per cent, revealed ovarian metastases. They considered of most significance the fact that none of the 102 patients had required a second palliative laparotomy during the follow-up period.

Discussion

In reviewing the experiences of these and other authors,[17, 18, 19] and relating them to our own small series, the following points seemed worthy of emphasis.

1. In most instances, patients presenting the complication of ovarian metastases had primary tumors of the colon or rectum which had penetrated the thickness of the bowel wall (Dukes' Stage B or C). This implies that the most likely route of spread is by direct seeding or implantation of cells onto the ovary.

2. In many instances reported, small ovarian implants were found microscopically that had been unsuspected on gross inspection.

3. On the other hand, as in our case 2, rapidly enlarging, bulky pelvic tumors are often the presenting complaint before the colon tumor becomes symptomatic. Therefore, the true primary tumor may be overlooked unless it is suspected or searched for.

4. In a great many cases, the ovaries seem to be the only, or at least the major, site of metastatic involvement. This suggests a generalized host resistance to the tumor, with a localized susceptibility of the ovary to tumor implants.

5. When it occurs following colon resection, ovarian metastasis usually presents as a bulky tumor, which is of clinical importance in that another laparotomy is often indicated for palliation.

6. Statistically, colon carcinoma is more common in the older age groups. However, these cases presenting with ovarian metastases are frequently premenopausal.

7. The prognosis, once ovarian metastasis has occurred, is poor, with an average survival time in the neighborhood of one year.

Conclusion

Metastatic involvement of the ovaries by carcinoma of the colon and rectum is uncommon, but not rare, occurring in 2 to 8 per cent of reported surgical series. Therefore, in the continuing effort to improve salvage rates by surgical attack on colon cancer, we feel strongly that the following tenets should be adopted as basic principles by all surgeons performing colon surgery.

(1) All female patients undergoing primary colon resection for adenocarcinoma, who are postmenopausal, should have synchronous bilateral oophorectomy performed also.

(2) Any female patient who is premenopausal, and operated upon for cancer of the colon or rectum, should be evaluated according to the criteria outlined by Rendleman and Gilchrist, as previously noted.

(3) Any patient presenting with an ovarian cyst or tumor as the primary problem should have a thorough workup of the gastrointestinal tract to exclude the possibility that the ovarian tumor represents metastasis from a primary neoplasm of the gastrointestinal tract.

Summary

1. Three cases are presented of women manifesting ovarian metastases from carcinoma of the colon.

2. A brief review of the current literature is presented to illustrate that some, but not the majority of authorities in this field, consider this complication of some significance.

3. Certain pertinent points worthy of emphasis have been enumerated.

4. A "modus operandi" is suggested for surgeons dealing with patients in this category.

(Continued on page 29)

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Use of Nalidixic Acid in the Treatment of Urinary Tract Infections

A NEW NAPHTHYRIDINE derivative, nalidixic acid,* in preliminary animal and clinical trials has demonstrated efficacy in the treatment of urinary tract infections.[1, 2, 3] Further studies to ascertain its effectiveness and toxicity seemed desirable.

METHOD AND MATERIALS

This investigation can be divided into two parts. First, routine urine cultures, and, when positive, in vitro sensitivity tests were made upon all patients undergoing cystoscopic examination. Secondly, in a limited number of these patients nalidixic acid was administered and its clinical efficacy and toxicity studied.

Culture was performed by adding urine to blood agar and eosin-methylene-blue media. Organisms recovered were then transferred to another blood agar and Meuller-Hinton plate, heavily cross-streaked and medium strength antibiotic disks for chloramphenicol, erythromycin, nitrofurantoin, kanamycin, neomycin, novobiocin, penicillin, polymixin, colistin, streptomycin, sulfamethizole, tetracycline, demethylchlortetracycline and nalidixic acid in 5, 30, and 60 mcg. strengths were used. Sensitivity studies against this latter drug were not done in nine patients to whom this drug was subsequently administered. In vitro sensitivity studies were not performed in three cases despite positive cultures. The dosage schedule used was 0.5 gm. nalidixic acid four times daily except as otherwise noted.

RESULTS

Eighty-eight positive urine cultures were obtained in 80 patients. Organisms cultured are listed in table 1. Table 2 summarizes the in vitro results. By totaling the positive and negative results, the actual number of sensitivity tests performed for each antibiotic drug can be obtained. Resistance to all antibiotics was demonstrated in Pseudomonas 1 and E. coli 1. Where sensitivity studies to nalidixic acid were done, Pseudomonas 6, Aerobacter 2, and E. coli 1 were resistant to all concentrations.

Nalidixic acid was administered to 26 patients whose ages varied from 3 to 85 years, average 60. Seventeen were male, nine female. Bacteria obtained upon culture in these patients were: Pseudomonas 14, E. coli five, Aerobacter three, Proteus one and unidentified Gram negative rod one. Negative urine cultures were obtained in two despite marked pyuria accompanied by chills and fever.

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These patients were subdivided into four categories for the purposes of this study. Category 1 comprising five patients was essentially that of an acute illness. Two were women with acute cystitis with positive cultures for E. coli, one of whom failed to respond to sulfamethizole, and both showing prompt clinical improvement and conversion to normal urinalysis upon nalidixic acid. The other three patients had febrile reactions post-prostatic transurethral resection accompanied by pyuria. One had a negative urine

CHART 1

ORGANISMS ISOLATED FROM PATIENTS WITH URINARY TRACT INFECTIONS

	No. Pts.	*No. Cultures*	*Without Sensitivity Studies*	*Repeat Cultures*		
				2	*3*	*4*
Pseudomonas	38	42	2	1	0	1
E. coli	22	26	0	2	1	0
Aerobacter	13	13	1	0	0	0
Proteus	4	4	0	0	0	0
Unident G. neg. rod.	2	2	0	0	0	0
Unident G. neg. diplococcus	1	1	0	0	0	0
Total	80	88	—	—	—	—

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* Negram, brand of nalidixic acid (Research No. Win 18,320), was supplied through the courtesy of the Department of Medical Research, Winthrop Laboratories, N. Y.

CHART 2

IN VITRO SENSITIVITY TESTS PERFORMED ON GRAM NEGATIVE ORGANISMS ISOLATED FROM URINARY TRACT INFECTIONS

	Pseudomonas		*E. coli*		*Aerobacter*		*Proteus*		*Unident. G. neg. rod*		*Unident. G. neg. diplococcus*	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Chloramphenicol	17	21	13	16	5	6	1	2	1	1	0	0
Erythromycin	0	37	0	25	0	11	0	3	0	2	0	0
Nitrofurantoin	9	28	14	8	4	5	0	4	0	1	1	0
Kanamycin	13	27	19	7	6	6	2	2	1	1	1	0
Neomycin	11	25	11	13	5	5	1	2	1	1	0	0
Novobiocin	0	35	1	24	0	11	0	3	0	2	0	0
Penicillin	0	36	0	25	0	11	0	3	0	2	0	0
Polymixin	2	23	0	11	1	0	0	3	0	0	0	0
Colistin	4	3	7	7	5	2	0	0	1	0	0	0
Streptomycin	2	35	6	18	3	8	0	3	0	2	0	0
Sulfamethizole	0	28	0	23	0	7	0	3	0	1	0	0
Tetracycline	9	28	12	13	4	7	0	3	0	2	0	0
Demethylchlortetracycline	1	23	1	16	2	1	0	4	0	1	1	0
Nalidixic 5 mcg	18	18	21	5	3	5	0	4	0	1	1	0
30 mcg	26	10	23	3	6	2	3	1	0	1	1	0
60 mcg	32	4	23	3	7	1	3	1	0	1	1	0

culture, one grew Aerobacter, and one Pseudomonas. One failed to improve on nitrofurantoin and sulfamethizole; the other to chloramphenicol, tetracycline, novobiocin and sulfamethizole. The latter did respond to colistin but relapsed when the drug was discontinued. Both responded to two to four weeks therapy with nalidixic acid. The last patient failed to respond to nalidixic acid but did revert to normal with chloramphenicol.

Category 2 comprised three women, two having acute exacerbation of chronic pyelonephritis and one recurrent cystitis. Cultures demonstrated E. coli in 2 and Pseudomonas in 1. Two were treated with tetracycline and sulfamethizole during the acute phase without improvement. All three had prompt relief and normal urinalyses when nalidixic acid was administered for two to four weeks. No further relapses occurred within a twelve month period.

Category 3 consisted of seven patients, six male and one female all with chronic infections and obstructions. Three had chronic cystitis, two with prostatic hypertrophy and one with urethral stricture; and four had chronic pyelonephritis, one with a ureteral calculus, one with a renal calculus, one with hydronephrosis secondary to a retrocaval ureter, and one with bilateral hydronephrosis secondary to contracture of the bladder neck. Surgical correction of the causes of obstruction was done in each patient except the one with urethral stricture in whom periodic urethral dilatations were performed. After surgery pyuria persisted in all despite treatment with sulfonamides, chloramphenicol, tetracycline, and nitrofurantoin. Organisms obtained on culture were: Pseudomonas 3, E. coli 1, Proteus 1, Aerobacter 1, and an unidentified Gram negative rod 1. Six improved on nalidixic acid five still having normal urinalysis three to eight months after treatment. The patient with urethral stricture had recurrent symptoms and pyuria four months later when the stricture was found to have recontracted. One patient with bilateral hydronephrosis had initial improvement, discontinued the drug after two weeks, and did not return for further follow-up until eleven months later. Again E. coli was found but did not respond to nalidixic acid.

Category 4 consisted of eight patients, five males and three females all with severe chronic infections requiring long-term therapy. Two were children aged three and six years. Four had chronic pyelonephritis (bilateral atrophic pyelonephritis 1, severe bilateral hydronephrosis secondary to congenital vesical neck contracture 1, bilateral polycystic kidney disease 1, and moderate hydronephrosis secondary to uretero-pelvic obstruction 1). Four had chronic cystitis (secondary to urethral stricture 2, congenital contracture of the vesical neck 1, post transurethral resection 1). Surgical correction of obstruction was performed in all except cases of urethral stricture where periodic urethral dilatation was performed. Bacteria obtained on culture were: Pseudomonas 7, Aerobacter 1. Postoperatively all failed to respond to a great variety of antibiotics. All responded to an initial course of nalidixic acid. One three year old male with hydronephrosis secondary to vesical neck contracture, was given 1 Gm. nalidixic acid daily for six months with resultant normal urinanalyses and negative urine cultures since. All others relapsed when the drug was discontinued after four weeks of therapy. All failed to respond to various antibiotics again. All responded to another course of nalidixic acid. When dosage was reduced to 0.25 Gm. four times daily in two adults, pyuria recurred and persisted despite increasing the dosage to two grams daily. One of these patients responded to a combination of tetracycline and nalidixic acid. In four patients nalidixic acid therapy has been maintained for up to ten months with control of the pyuria and without reaction. Two of these patients have moderate elevation of their blood urea nitrogen as a result of their diseases. One has had intermittent nausea and anemia which we attribute to renal insufficiency.

Two patients with cystitis and prostatic hypertrophy complained of nausea when nalidixic acid was administered and voluntarily discontinued the drug after two days. One patient with persistent hematuria of one month's duration, negative urine cultures, acid fast and Papanicolaou smears, and cystoscopic and pyelographic findings was placed on nalidixic acid without improvement. She subsequently was discovered to be sensitive to Butazolidin and the hematuria ceased when this drug was discontinued.

No fungus overgrowth, kidney involvement, or blood dyscrasia were observed. Toxicity consisted of nausea in two patients.

Comment

Both in vitro and in vivo studies indicate nalidixic acid to be an effective drug in the treatment of Gram negative urinary tract infections. Nausea of moderate degree in two patients was the only reaction noted.

Minimal dosage in adults should be two grams in divided doses. Collaborative studies[1] have indicated that one Gram four times daily for one to two weeks is preferable with continued therapy at two grams daily. Dosage below this may result in treatment failures with emergence of resistant strains. Children seem to respond to one-half of the adult dose. This study again emphasizes the importance of relieving urinary tract obstruction if one is to eliminate infection.

Summary

In vitro sensitivity studies of organisms from eighty patients and in vivo clinical trials in twenty-six cases utilizing nalidixic acid indicates this to be an effective, safe drug in the treatment of urinary tract infections due to Gram-negative organisms.

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(Continued from page 26)

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Statement of Opposition of the Missouri State Medical Association

To: H.R. 3920, The King-Anderson Bill

Special Article

On behalf of the nearly 4,000 physician members of the Missouri State Medical Association, we are submitting to your committee a report concerning several important elements relating to the availability of health care assistance for the aged in the State of Missouri. We believe that these facts will be of value to the committee in its consideration of proposed legislation to establish a federal health care program through the social security system.

In June 1961, at the close of the 71st session of the Missouri General Assembly, a resolution was passed establishing a joint committee of the Assembly for the purpose of making a complete and thorough study of the problem of providing health care assistance to the senior citizens of Missouri and reporting its findings and recommendations to the session of the legislature convening in January 1963.

This interim committee, composed of state senators and representatives of both political parties, held numerous meetings and public hearings throughout the state during an 18 month period, inviting all interested citizens, and professional, business and labor groups to give both factual information and suggestions concerning health care for Missouri's elderly.

The statement was presented by Durward G. Hall, M.D., member of Congress from the 7th Missouri District, before the House Ways and Means Committee in Washington, D. C., on November 20, 1963, as part of his testimony in opposition to H.R. 3920, the King-Anderson bill.

The Situation in Missouri

The findings of this committee as reported to the general assembly early this year included the following:

"In this nation, the State of Missouri ranks second only to the State of Iowa in the proportion of persons 65 years of age and over in relationship to the total population of the state. The 1960 census showed that more than half a million Missourians (503,411) are aged 65 or over, representing 11.7 per cent of the total population of this state. Expressed another way, about one out of every eight persons in Missouri is 65 years of age or older. It has been estimated by sources considered reliable that by 1970, Missouri will have 600,000 persons 65 years of age and over. In many rural counties where living is less costly and, therefore, a good retirement climate exists, the percentage of the total population of the counties of persons 65 or older approaches and even exceeds 20 per cent.

"Today about six out of every 10 aged persons eligible for retirement (58.7 per cent) in Missouri receive payments under the Federal Social Security program. The actual number of persons receiving these benefits is 295,000 and the average monthly payment is $71.50. At present, about one fourth of all aged persons in Missouri, about 108,000, are receiving State Old Age Assistance payments, popularly referred to as the 'Old Age Pension.' At the present time about 39,000 aged persons are receiving both payments from the Federal Government under Social Security and the 'State Old Age Pension' primarily because they happen to have high medical expenses which cannot be met from the benefits received from one program alone and they do, therefore, qualify for both programs.

"It is most interesting to note that the Missouri Division of Employment Security in November 1959, estimated that about 103,000 persons 65 and over in Missouri had some employment. This indicates that about one out of five aged persons are either employed for wages or self-employed on a part time or full basis. . . .

"The Committee does not mean to infer that all Senior Citizens in this state are in dire need of medical assistance. This is not the case. Fortunately, as noted by the number employed, many are in very good health and have few, if any, medical expenses. Many others, though not employed, are able to get along quite well through savings and Federal Social Security payments. Many have been able to provide themselves with insurance to help in their medical emergencies. Many are being assisted privately by families who are able and willing to assist their parents in medical emergencies. Many local government units are presently doing what their financial abilities will allow to assist Senior Citizens with their medical care problems. The Counties of Buchanan, Greene, Marion and Pettis have unique and admirable local programs of medical care in effect. Also the two metropolitan counties of Jackson and St. Louis and the City of St. Louis and Kansas City offer considerable assistance. The Committee has viewed with pleasure the apparent growth of feeling of local responsibility and the growth of the use of private medical insurance by those Senior Citizens who can afford it.

". . . It is the conclusion of the committee that the greatest need of all (for health care assistance) is found within that group who are presently on the Old Age Assistance rolls of the State of Missouri. Most of this group of persons do not have the type of employment history that also allows them to draw payments under the Federal Social Security program. They, by statute, are extremely limited in their income and available assets or they wouldn't and couldn't be on the OAA rolls for state payment. The maximum monthly payment to this group is presently $70.00 and the average payment is approximately $65.00 monthly. It is obvious that after present day living expenses are taken from such an amount that there is and could be little, if anything, left for medical expenses no matter how dire the need might be. The Committee does not mean to infer that there is no need for medical assistance in any group other than the Old Age Assistance group."

Legislative Action in 1963

The interim committee's recommendations for legislative action became the basis of bills passed by the Missouri General Assembly of this year, further implementing the Kerr-Mills Law in Missouri.

The Missouri State Medical Association favored and worked for the passage of this legislation. It was the result of an intensive year-and-a-half long study of the problem by 10 state legislators, and presented a program tailor-made to the needs of Missouri's elderly.

The first of the two programs, which has been signed into law by the Governor, provides increased aid for health and hospital expenses for persons receiving Old Age Assistance. The second bill, while passed by both houses of the General Assembly, was vetoed by the Governor after the close of the session. It would have established a program of health care assistance for the "near-needy" aged persons who are not eligible for OAA, who have adequate financial resources for normal expenses, but whose income and resources are insufficient to meet the costs of serious or prolonged illness. According to published reports, the Governor's veto was based principally on the uncertainty of the cost of the program rather than its desirability or expense. He was quoted as saying, "I feel that in the future if it is possible to get accurate information as to how much such a program will cost, then it should be given consideration."

Recipients of public assistance are now provided benefits for inpatient hospital care for serious illness or injury for which outpatient care will not suffice; the condition need not be, as formerly, a "medical emergency" or an "acute serious illness." Monthly payments to those requiring care in a nursing home have been raised to a maximum of $80, and payments to completely bedfast and totally disabled welfare recipients have been raised to a maximum of $110 a month. For the first time, Missouri will provide benefits for dental expenses, drugs and medicines—the dental care to be authorized by the division of welfare and provided by a licensed dentist, and drugs and medicine also to be authorized by the Division of Welfare and prescribed by a licensed physician, osteopath or dentist. The legislature authorized $4,322,320 in state funds to implement this program for the 1963-1965 biennium. Under Kerr-Mills provisions, this will be matched, we are informed, by about $6,000,000 in Federal funds.

Under the provisions of the proposed program for the near-needy, aid would have been provided for inpatient hospital care for serious illness or injury, as well as for drugs prescribed by the attending physician for a period of up to 30 days after the patient's release from a hospital.

We are gratified that this program had the support of the state legislature and believe that a similar bill will be introduced and passed in the next session of the General Assembly.

Private Insurance

In the private realm, the non-profit Blue Shield and Blue Cross Plans of St. Louis and Kansas City recently introduced special medical surgical and hospital protection plans for persons aged 65 and over to supplement the coverage they have long offered Missouri citizens without regard to age.

The St. Louis and Kansas City Blue Shield programs for persons over 65 are modeled on the program developed jointly by the American Medical Association and the National Association of Blue Shield Plans. Both programs include paid-in-full benefits for members with limited incomes, and, as of June 30, a total of 9,000 persons were enrolled in the two Senior Citizen Programs. Including these special "senior" programs, a total of more than 75,000 Missourians aged 65 and over are now enrolled in various non-group medical-surgical protection plans of the two Blue Shield Plans.

Many thousands of Missouri's over-65 group are similarly enrolled in Blue Cross hospitalization programs, while still more thousands are covered by commercial insurance.

Conclusion

As physicians, the members of the Missouri State Medical Association are deeply concerned with the problem of medical care for the aged. As a group, and individually, we worked for the passage of the two statutes detailed.

The Kerr-Mills program helps those elderly persons who really need assistance. We believe that this is documented by the close relationship between the findings of the interim committee of the state legislature and the statutes that body passed. The Missouri Assembly found out what kind of medical care program was needed—and promptly enacted it!

Statistics compiled recently by the Missouri Division of Health in cooperation with the Missouri Hospital Association concerning the methods of payment by patients discharged from a random hospital sample, made up of 63 outstate Missouri institutions, between July 1962 and December 1962, indicate that the problems of the aged in obtaining and paying for hospital care have been greatly exaggerated.

The figures from this six-months period show that, of a total of 90,192 persons discharged from care in these hospitals, only 929—or 1 per cent —were unable to pay any of their costs. Of this number, just 186—two-tenths of 1 per cent of the over-all total—were age 65 or over.

During this same period, Missouri's program of health care for the needy aged—an implementation of the Kerr-Mills Act—provided care for 2,122 patients over age 65 out of the 90,192 total cases documented in the study. In addition, 416 persons aged 65 or over received some assistance in paying hospital costs from this state program to supplement resources of their own.

The striking fact is, then, that the remainder of the more than 90,000 cases in this study were able to pay for their own care through Blue Cross, insurance benefits, credit payments or cash resources. Only 2,724 people over age 65, out of more than 90,000 patients, needed assistance through the Kerr-Mills program or direct charity from the hospitals. This is only a little more than 3 per cent.

These statistics point up the fact that the need for governmental aid is minor. Even at the 1962 level of benefits, Missouri's Kerr-Mills program was taking care of almost the entire problem that does exist. Since this study was made, of course, the Missouri legislature has authorized the increased and expanded payments under the Kerr-Mills program which have been discussed earlier. It is apparent that what problem there is in providing medical care for the aged in Missouri is being taken care of by the state, and that, therefore, there is no need for the enormously costly and restrictive King-Anderson approach.

Further, we believe that it is important to note the increasing number of persons aged 65 or over who are being covered by private health insurance plans. Nationally, 53 per cent of the elderly not in institutions had such protection at the close of 1961—an increase of 132 per cent over a 10-year period!

Finally, we are convinced that the adoption of a compulsory, federal health care plan for the aged under the social security system would disrupt the traditional doctor-patient relationship, and, thereby, lead to a deterioration of the system of health care which is second to none in the world. Not only would such a program interfere with patient care, it would force the working people of today to pay higher taxes to provide such care to every man and woman over a certain age limit, regardless of need.

Let me emphasize again that our Association believes that medical care should be provided for those persons who are in need. And this, we believe, can be done at the local and state levels —as it is now being done in Missouri—without the adoption of a federally-controlled, compulsory scheme.

We strongly urge, therefore, that the members of the Ways and Means Committee, vote against and reject H.B. 3920, the "King-Anderson" bill.

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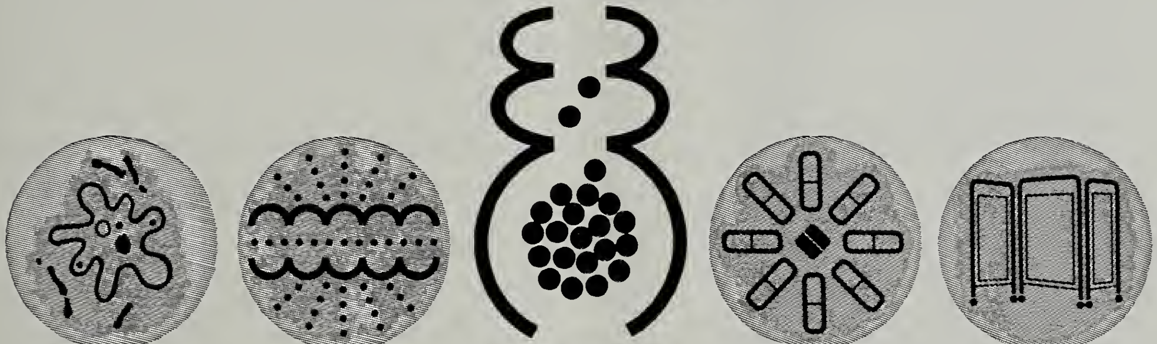

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Research in the Service of Medicine SEARLE

Kenneth C. Hollweg, M.D.

President's Message

The 106th Annual Session of the Missouri State Medical Association will be held in St. Louis in only two months—March 8 to 11—and it is certainly not too early to make plans to attend what promises to be an outstanding meeting.

All who have attended recent Annual Sessions know of the excellence of the scientific programs. Dr. Matthews and his committee have arranged an exceptional group of presentations again this year—a program from which any practicing physician can benefit greatly.

In addition, I know I need not emphasize the importance of the deliberations of the House of Delegates in preparation for the critical months ahead. This year, I hope that everyone will take renewed interest in the Association's policies and make the effort to attend the meetings of the House and the Reference committees. As you know, every MSMA member is welcome to present his views on the topics being considered by the Reference Committees.

You will find the preliminary program of the session in this issue of Missouri Medicine. I urge you to mark this event as a "must" on your 1964 calendar today.

Kenneth C. Hollweg, M.D.

EDITORIAL

AMA ISSUES OPTIMISTIC REPORT ON MEDICAL EDUCATION

The American Medical Association on Nov. 15, 1963 reported significant advances in three areas of medical education vital to the future quality of medical service in this country.

The 1962-63 annual report on medical education, prepared by the AMA Council on Medical Education and Hospitals, cited the following developments:

—Firm commitments for the construction of six new medical schools, bringing to 11 the total number now in the planning stage.

—A 10 per cent increase in the number of medical school applicants, the first upturn in six years.

—Evidence of an enlarging pool of potential medical teachers.

A major concern of recent years has been the adequacy of the future supply of physicians for a growing population with increasing expectation for medical service, the council said. An increase in the future supply of physicians is a well-documented necessity and this depends primarily on expansion of facilities and an increase in medical teachers and students, it said.

"Though it is too early for certainty, still, on the basis of current progress, cautious optimism can be expressed in regard to satisfying future needs," the council said.

Despite the generally optimistic report, the council said efforts to interest more students in a medical career, which have been intensified in recent years, should not be relaxed. Medicine will continue to compete with an increased number of other "status professions" for top students, it said.

The public announcement of six new medical schools was made by the University of Arizona, Tucson; Mt. Sinai Hospital, New York City; University of Massachusetts, Amherst; University of California, San Diego; Michigan State University, East Lansing, and Pennsylvania State University, University Park, the AMA report said.

Of the five new schools previously announced, New Mexico plans to enroll its first medical students for the 1964-65 academic year; Rutgers plans to accept an entering class for 1965-66, and the University of Texas, San Antonio, for 1966-67. Brown has accepted for 1963-64 its first college class which will in part constitute its first medical students in the next few years, and the University of Connecticut is in the process of developing its architectural and academic plans.

There are many other institutions which are giving serious study to the establishment of medical schools, the report said, and a growing emphasis on construction of teaching facilities is anticipated as a result of the Health Professions Educational Assistance Act passed by Congress this year.

The act for the first time authorizes federal matching grants for construction of teaching facilities. Such matching funds have long been available for construction of research facilities, the report noted, and there has been an apparent disproportionate expenditure of construction funds for research as opposed to teaching facilities.

The increase in the number of students applying for admission to medical schools confirmed the council's prediction a year ago that a declining trend since 1949 reached its lowest point in 1961-62 and would begin an upward swing.

Applicants for medical schools in 1962-63 totaled 15,847, compared with 14,381 in the previous year, an increase of 1,466 or 10 per cent.

Preliminary estimates indicate that the number of applicants for the current 1963-64 class have again increased at least 15 per cent to 18,184, the report said, and it appears likely that the number will increase substantially during the next several years.

Total enrollment in the nation's 87 approved medical schools for 1962-63 was 31,491, up 413 from 1961-62, the report said. However, it said, a more satisfactory estimate of the rate of expansion of teaching facilities may be the addition of 159 first-year students during that year, a 2.2 per cent increase.

However, the council concluded that the present supply of full-time faculty was adequate or nearly so. This was based on the over-all continuing decline in the ratio of teachers to students and the fact that the difference in this ratio among schools in good financial condition and the less affluent institutions has decreased, it said. The ratio among the affluent schools for 1962-63 was 4.5:1, compared with 6.7:1 among the other schools, it was reported.

As to the future, the council said, if the same rate of increase in full-time faculty recorded in the past three years continued until 1970, the total number would then be somewhat in excess of the estimated demand.

Ramblings of the Field Secretary

Dr. Leslie of Kirkwood and Dr. Senn of Herculaneum register.

Drs. Dowell, Siegel, Whitten and Schulte consider an important matter.

The Fourth Annual M.D. Day was held at the University of Missouri School of Medicine, Friday and Saturday, November 15 and 16. Actually, this represented the Fourth Annual "get together" of the medical alumni and other medical friends and the faculty of the school of medicine. The scientific part of the program was presented as a joint effort by the Oklahoma University and Missouri University Medical School faculties. In addition to the scientific program held throughout the day on Friday and on Saturday morning, a Friday evening social hour and dinner was held at the Daniel Boone Hotel and a buffet luncheon was served at the Medical Center Saturday noon.

Approximately 200 physicians registered for this outstanding occasion. All sessions, beginning with the first on Friday morning at 9:00 a.m., were well attended. During coffee breaks and regular off periods, it was interesting to see old friends greeting each other. In numerous instances some physicians, who were classmates, met again for the first time. Added to the opportunity of participating in an excellent scientific program, the privilege of visiting with friends from all over the state, attending the MU-KU freshman football game and the Oklahoma-Missouri game, those attending this year's M.D. Day had a full and memorable weekend.

Drs. Knight of Kansas City and Smith of Clinton shake hands with audience approval.

The attendance and apparent interest in this year's M.D. Day affair is indicative of the momentum which this idea has now gathered. This year's attendance was the largest to date and the many comments overheard point to a continuing increase in interest and participation in future M.D. Day programs to be held at the University of Missouri School of Medicine to coincide each year with an outstanding football game at the university.

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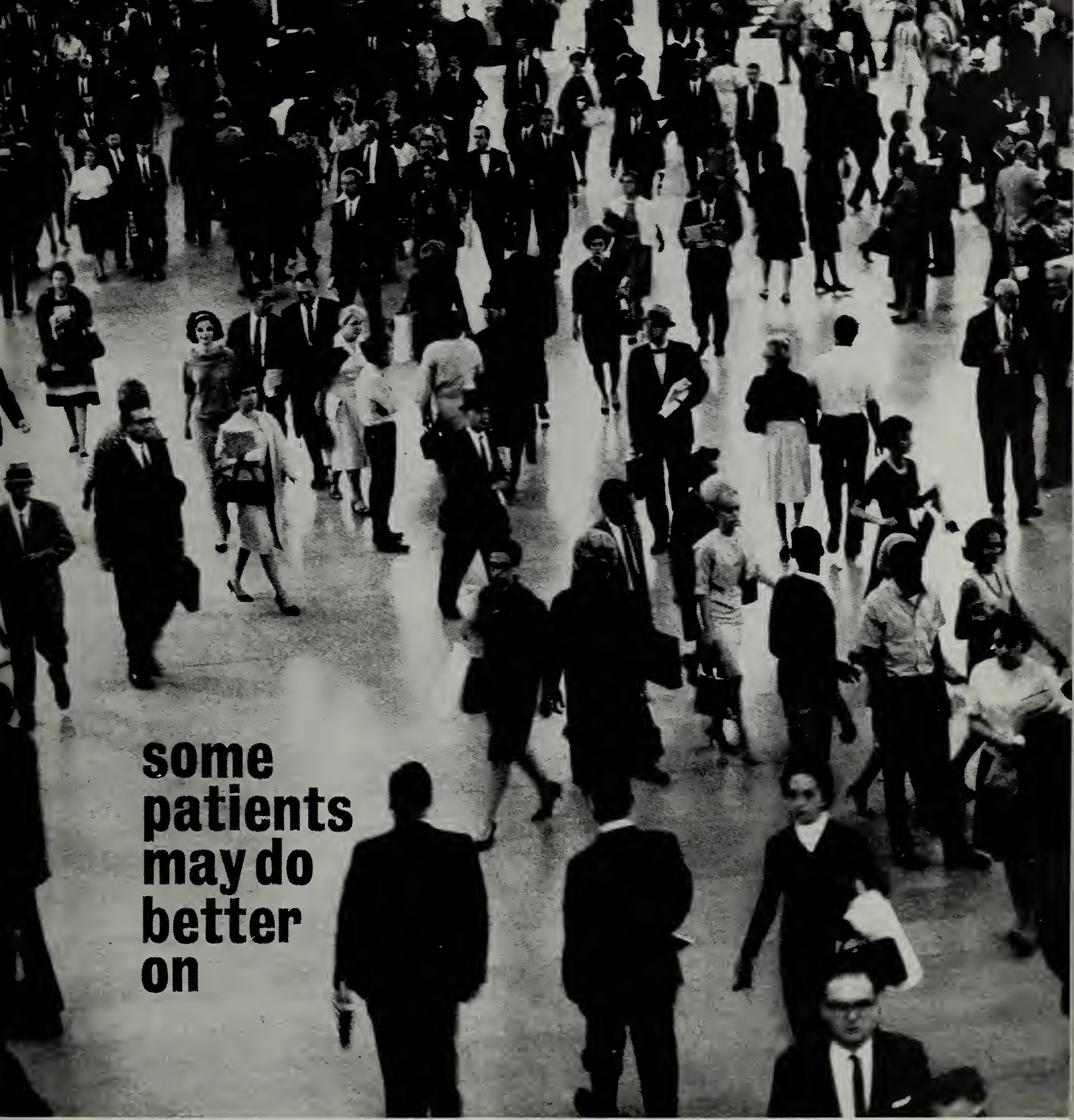
HOTEL

Dr. Hamlin, President M.U. Medical Alumni, presides at banquet.



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News—Personal and Professional

The chairman of scientific exhibits at the recent annual meeting of the American Society of Anesthesiology, held in Chicago, was **Oral B. Crawford**, M.D., Springfield.

"Emergency First Aid" is the title of a book written by Fred A. Wappel, athletic trainer at Missouri University. It is being edited by **Hugh Stephenson**, M.D., Columbia.

The VFW Auxiliary recently held a meeting at which a film on cancer was shown and discussed by **T. J. Fisher**, M.D., of Hannibal.

A memorial plaque honoring the late H. B. Henrickson, M.D., was unveiled at a ceremony in Poplar Bluff on November 12, 1963.

The speaker at the November meeting of the Jasper County Medical Society was **Frank McDowell**, M.D., of St. Louis.

The St. Louis Pediatric Society has installed **James K. Turner**, M.D., St. Louis, as president for the 1963-1964 term. Other officers elected were **Francis X. Lieb**, M.D., president-elect and **Helen M. Aff-Drum**, M.D., secretary-treasurer.

At the fourth Annual Dinner of the medical staff of St. Vincent's Hospital, portraits and plaques were presented to **S. R. Banet**, M.D., and Rev. Joseph E. McIntyre, C.M., by Sister Juliana, Administrator of the hospital.

Dr. Banet and Rev. McIntyre receive plaques from Sister Juliana.

The Catholic Hospital Association recently announced that Patrick H. Hoey, M.D., formerly on the staff of the Air Force Medical Services, was appointed director of medical relations.

The Jackson County Medical Society held a Recognition Dinner on November 20 for Mr. William H. Bartleson on the occasion of twenty-five years as an executive official with the society.

The medical examiner system for Missouri in lieu of the office of coroner was proposed by **Charles B. Wheeler Jr.**, M.D., Kansas City, at the recent joint annual meeting of the St. Joseph Bar Association and the Buchanan County Medical Society.

"Advances in Surgery" was the subject discussed by **Charles Willman**, M.D., St. Joseph, at a recent meeting of the Kiwanis Club in St. Joseph.

"Advances in the Treatment of Cancer" was discussed by **Herbert L. Warres**, M.D., Springfield, at a meeting of the Springfield Community Planning Council.

Selected for the rank of Knight Commander of the Court of Honor recently was **Armand D. Fries**, M.D., St. Louis, one of 44 Thirty Second Degree Masons so selected.

DEATHS

Morris, Clyde S., M.D., Caruthersville, a graduate of Tulane University, 1916; member of Pemiscot County Medical Society; aged 73; died October 8, 1963.

Kohn, Cecil M., M.D., Kansas City, a graduate of the University of Kansas, 1932; member of Jackson County Medical Society; aged 56; died November 7, 1963.

Haynes, Lee, M.D., Kansas City, a graduate of Beaumont Hospital Medical College, 1900; member of Jackson County Medical Society; aged 90; died November 8, 1963.

Shutt, Cleveland S., M.D., St. Louis, a graduate of St. Louis College of Physicians and Surgeons, 1904; member of St. Louis Medical Society; aged 82; died November 26, 1963.

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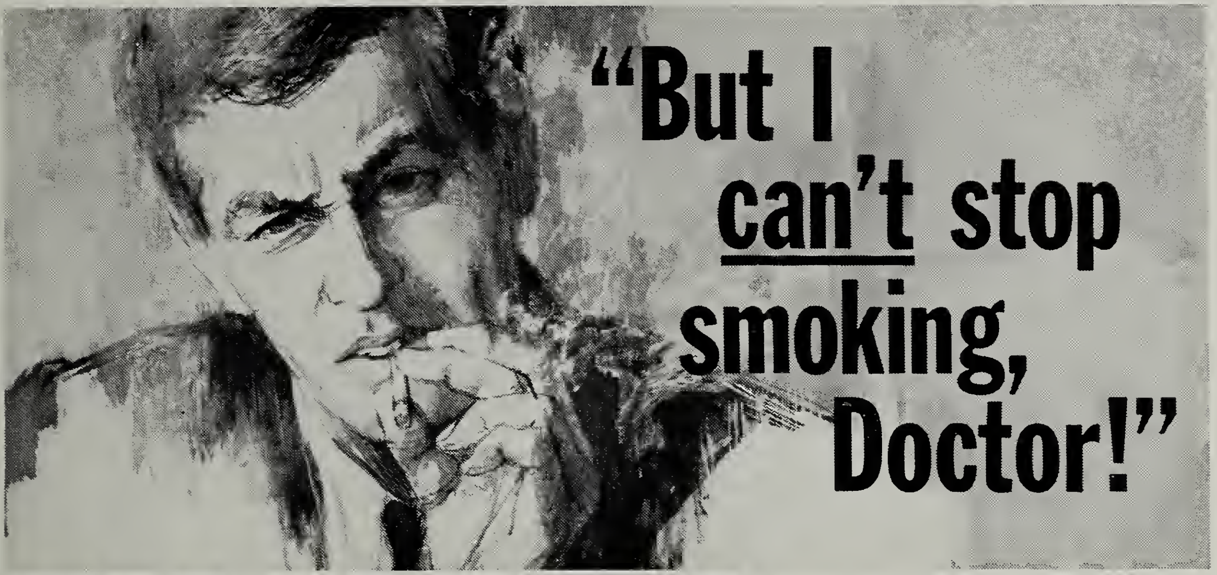
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MISSOURI STATE MEDICAL ASSOCIATION

Preliminary Program

106th Annual Session

Hotel Chase, St. Louis

March 8, 9, 10, 11, 1964

Sunday, March 8, 1964

12:00 noon Registration of Delegates. Lobby floor.

1:30 p.m. House of Delegates.

3:00 p.m. Reference Committee meetings.

6:30 p.m. Cocktails and buffet dinner honoring Leonard T. Furlow, M. D., and Mrs. Delevan Calkins. St. Louis Medical Society Building, 3839 Lindell Blvd. Complimentary by the St. Louis Medical Society.

Monday, March 9, 1964

8:00 a.m. Registration. Lobby floor.

9:00 a.m. Panel: What's New.
Moderator: Thomas F. Frawley, M.D., St. Louis.
New Trends in Medicine: William D. Davis Jr., M.D., New Orleans.
New Trends in Surgery: Thomas L. Marchioro, M.D., Denver.
New Trends in Allergy: Charles W. Parker, M.D., St. Louis.
New Trends in ENT: John J. Shea, M.D., Memphis, Tenn.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Panel: Current Concepts in Treatment of Chronic Renal Disease.
Moderator: C. Thorpe Ray, M.D., Columbia.
Problems Involved in an Artificial Kidney Center Devoted Solely to Chronic Dialysis, F. K. Curtis, M.D., Seattle.
Some Problems Involved in Human Homo-transplantation, Thomas L. Marchioro, M.D., Denver.

12:00 noon. 50 Year Club Luncheon.

12:00 noon. Committee on Maternal Welfare Luncheon.
Speaker: Arthur L. Haskins, M.D., Baltimore, Md.

Medical Session.

2:00 p.m. Panel: Liver Disease.
Moderator: Robert E. Koch, M.D., St. Louis.
Problems in Treatment of Cirrhosis, William D. Davis Jr., M.D., New Orleans.
Sponsored by the Missouri Society of Internal Medicine.
Hemochromatosis, Speaker to be announced.
Sponsored by the Missouri Diabetes Society.
Current Problems in Hepatitis, Speaker to be announced.

Surgical Session.

2:00 p.m. Regional Enteritis—Surgical Aspects, B. Marden Black, M.D., Rochester, Minn.
Sponsored by the Missouri Surgical Society.

2:30 p.m. Subject to be announced. Arthur L. Haskins, M.D., Baltimore, Md.
Sponsored by the St. Louis Gynecologic Society.

3:00 p.m. To be announced.
Sponsored by MSMA Committee on Trauma.

3:30 p.m. Intermission to View Exhibits.

4:00 p.m. House of Delegates.

5:30 p.m. Reference Committee meetings.

Tuesday, March 10, 1964

8:00 a.m. Registration. Lobby floor.

9:00 a.m. Panel: Hits and Misses in Current Drug Therapy.
Moderator: Edward D. Kinsella, M.D., St. Louis.
Cancer Chemotherapy, C. Gordon Zubrod, M.D., Bethesda, Md.
The Use of Thyroid, Thyroxine and Triido-thyronine in the Treatment of Hypothyroidism and Other Conditions, Paul H. Lavietes, M.D., New Haven, Conn.
MAO Inhibitors, Their Use, Misuse and Therapeutic Effects, Nathan S. Kline, M.D., Orangeburg, N. Y.

9:00 a.m. Panel: Adolescent Medicine.
Moderator, James P. King, M.D.
Panelists:
Felix P. Heald Jr., M.D., Washington, D. C.
Willard M. Allen, M.D., St. Louis.
Robert J. Corday, M.D., St. Louis.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Subject to be announced, M. D. Overholser, M.D., Columbia.

Missouri University Medical Award Winner.

11:30 a.m. To be announced.

12:00 noon. University of Missouri Medical Alumni Association Luncheon.

1:30 p.m. Medical Economics Session.
Topic to be announced.

3:00 p.m. Intermission to View Exhibits.

3:30 p.m. Panel: Treatment of Hiatus Hernia and Esophagitis.
Moderator: Hector W. Benoit Jr., M.D., Kansas City.
Panelists:
Donald B. Effler, M.D., Cleveland, Ohio.
Nicholas C. Hightower, M.D., Temple, Tex.
Richard Schatzki, M.D., Boston, Mass.

3:30 p.m. Panel: Long Term Management of Ischemic Heart Disease.
Moderator: To be announced.
Coronary Arteriography: Clinical and Psychological Correlations, Richard S. Ross, M.D., Baltimore, Md.
Impending Myocardial Infarction, R. E. Beamish, M.D., Winnipeg, Canada.
Prophylactic Anticoagulent Therapy After Myocardial Infarction, Herbert E. Griswold Jr., M.D., Portland, Oregon.
Sponsored by the Missouri Heart Association.

7:30 p.m. Banquet in Honor of Past Presidents.

Wednesday, March 11, 1964

7:30 a.m. House of Delegates Breakfast Meeting.

THE MISSOURI SOCIETY OF MEDICAL TECHNOLOGISTS

March 8-11, 1964

Hotels Chase-Park Plaza, St. Louis

March 8

St. Louis University Hospitals—Firmin Desloge Hospital.

Afternoon—Business meeting—Missouri Society of Medical Technologists.

Evening—Business Meeting—Missouri Association of Blood Banks.

March 9

Stockholm Room—Hotel Park Plaza.

MORNING—MISSOURI ASSOCIATION OF BLOOD BANKS

Many aspects of Modern Blood Banking are to be presented.
A question-answer panel will be included in program.

AFTERNOON

Hematology and Coagulation subjects are tentatively scheduled.

March 10

MORNING

Bacteriology and related topics are presently planned.

AFTERNOON

Administrative and Personnel problems relating to Laboratories, and Medico-legal aspects of Laboratories and Blood Banks will be discussed.

March 11

MORNING

Chemistry Program includes quality control, Enzymology and new concepts in this field.

"THE PHYSIOLOGICAL BASIS FOR DIAGNOSIS AND TREATMENT OF DISEASE"

A One-Day Postgraduate Course Co-Sponsored by
St. Louis University School of Medicine
and
Missouri State Medical Association

All Sessions at
St. Louis University School of Medicine
Wednesday, March 11, 1964
10:00 a.m. to 3:30 p.m.

Registration Fee—$10.00, includes lunch

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Department of Internal Medicine
St. Louis University School of Medicine
1325 South Grand Blvd.
St. Louis 4, Missouri

Watch for further announcements

County Society News

FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

Grand River Medical Society

On November 14, 1963 thirty-nine members, wives, and guests met at Chillicothe's Strand Hotel for dinner and the regular monthly meeting.

Dr. Bernie Andrews, of Kansas City gave a concise but informative discussion on AMPAC and its importance to all of us.

Dr. David R. Ginder, of the Department of Medicine of the University of Missouri, spoke on the clinical application of antibiotics. His excellent summaries were very well received.

In addition to Dr. Ginder and Dr. Andrews, our guests included Mrs. Andrews, Mrs. Lawrence Crispell, President of the State Woman's Auxiliary; Jerry Stretz of Upjohn; and Alan Klein of Merck, Sharp and Dohme.

Jack L. Vinyard, M.D., *Secretary*

SECOND DISTRICT

HARRY L. GREENE, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

The Chariton-Macon-Monroe-Randolph County Medical Society held a regular monthly dinner meeting at the Woodland Hospital in Moberly on Thursday night, November 14. The scientific speaker for the evening was Harry G. Moore Jr., M.D., Medical Director of the Child Center of our Lady of Grace in Normandy, Missouri. Dr. Moore centered his talk on "The Disturbed Child." He indicated that there are some one million children in school in the U. S. who need psychiatric care and possibly another million not in school needing such care. The percentage of disturbed children from broken homes or from homes where there is not proper correction is much higher, he said. His feeling was that a spanking possibly given at the correct time was an efficient corrective measure in many cases. He pointed out that in some cases in handling disturbed children, the parents are the major problem.

Officers of the society who were elected to serve for 1964 are as follows: President, Thomas S. Fleming; Vice-President, L. E. Huber; Secretary-Treasurer, J. Will Fleming Jr. Delegates to State Convention are: Chariton County, F. L. Harms, alternate, D. D. Stuart; Macon County, James E. Campbell, alternate, Howard Miller; Monroe County, F. A. Barnett, alternate, G. M. Ragsdale; Randolph County, A. P. Rowlette, alternate, Robert Hasson. Censors are: Chariton County, D. D. Stuart; Macon County, D. E. Eggleston; Monroe County, F. A. Barnett; Randolph County, L. E. Huber.

In addition to the annual election during the business part of the meeting, the society voted approval of a four county wide Sabin Oral Polio Clinic to be held sometime in the next few months. Approval was also given to a program of teaching a class of individuals in the area, who have dealings with emergency cases, on how to give external cardiac massage, artificial respiration and the proper method of administering oxygen.

Members present at the meeting were: Drs. D. E. Eggleston, Howard Miller, Gretchen Collins, J. E. Campbell and Carl Rinker, all of Macon County; F. L. Harms, D. D. Stuart and G. C. Rice, Chariton County; F. A. Barnett, Monroe County; and Josephine Baker, A. P. Rowlette, J. Will Fleming Jr., Thomas S. Fleming, R. H. Young, W. D. Chute, C. C. Cohrs, L. E. Huber, Robert Hasson, P. V. Dreyer, C. C. Smith and S. R. Szymanski, all of Randolph County.

J. W. Fleming, M.D., *Secretary*

Marion-Ralls-Shelby County Medical Society

A dinner meeting of the Marion-Ralls-Shelby County Medical Society was held at the Moose Lodge in Hannibal on Tuesday night, November

The speaker catches the attention of all present.

Drs. Landau, Walterscheid and Foreman confer at close of meeting.

19. Following a social hour and dinner the society took up a number of business matters including discussion of the third Sabin Oral Polio Clinic to be held for the Hannibal area on December 8. In addition, the new program for dispensing of drugs under the Kerr-Mills Law in Missouri was discussing with a number of pharmacists from the Hannibal area, who were present, taking part in the discussion.

The society feels that definite changes need to be made by the Missouri Division of Welfare in this particular program.

Mr. Ray McIntyre, Field Secretary of the State Medical Association, was invited to speak to the group on State Association matters. His remarks were primarily centered on the medical student loan program which the State Medical Association established in the fall of 1960 and which to date has loaned approximately $104,000 to Missouri residents attending medical schools.

The scientific discussion of the evening was given by Dr. Dan Landau of Hannibal who spoke on "Rheumatic Fever." Dr. Landau is Vice-President of the Missouri Heart Association and Chairman of the State Wide Advisory Committee on Rheumatic Fever to the Missouri Heart Association. A question and answer period followed Dr. Landau's formal presentation.

JOHN WALTERSCHEID, M.D., *Secretary*

FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

LINCOLN-ST. CHARLES COUNTY MEDICAL SOCIETY

A dinner meeting of the Lincoln-St. Charles County Medical Society was held at the Golf View Inn at the St. Charles Golf Course on Tuesday evening, November 26. The evening festivities began with a social hour followed by dinner and an interesting and informative program.

The speaker for the evening was David G. Hall, M.D., Chairman of the Department of Ob-Gyn at the University of Missouri School of Medicine. Dr. Hall discussed, "The Stimulation of Labor." A question and answer period followed his formal presentation.

ROBERT J. FLEMING, M.D., *Secretary*

SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

WEST CENTRAL MISSOURI MEDICAL SOCIETY

The regular monthly meeting of the West Central Missouri Medical Society was held at the Nevada Country Club, Nevada, Thursday, November 14. The social hour for visitation among the doctors and their wives was as usual very much enjoyed. This refreshing hour was followed by a fine steak dinner.

Doctors and their wives enjoyed an excellent dinner.

President Edward Jones opened the program. The secretary read the minutes of the last meeting and brought forth some new business in regard to correspondence recently received from the District Office of the Missouri Division of Health in Springfield. Dr. Jones introduced our State Association President, Dr. Kenneth Hollweg of Kansas City, who was making his official visit to our society. He presented a slide lecture on the organizational structure of the Missouri State Medical Association, giving us a well illustrated picture of our organization with its various committees, and the functions of the state organization as well as those of our county societies and the AMA. We were sorry that many

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Drs. Pearse, Barger, Giesler, Jones, Hollweg and Wray visit after meeting adjourns.

of the young members of our group were not present to hear his presentation.

The report of the nominating committee, previously appointed by Dr. Jones, was read. Dr. Carter W. Luter of Butler was presented for President; Dr. Wm. H. Elett, Appleton City, Vice President and Dr. Roy Pearse, Nevada, for Secretary-Treasurer. This slate of suggested officers for 1964 was unanimously elected.

With no further business at hand the society adjourned until its December meeting to be held in Butler.

CARTER W. LUTER, M.D., *Secretary*

Dr. Hollweg was the featured speaker.

NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

MID-MISSOURI COUNTY MEDICAL SOCIETY

The Mid-Missouri County Medical Society and the doctors' wives held a dinner meeting at the Shepherd of the Hills Motel Restaurant at Lebanon on Thursday night, November 14. Following the social hour and dinner Francis Maples, M.D. of Springfield, spoke to the group on "Gastric Hypothermia." Dr. Maples illustrated his talk with a movie and slides.

M. K. UNDERWOOD, M.D., *Secretary*

TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

PERRY COUNTY MEDICAL SOCIETY

A meeting of the Perry County Medical Society was held on Thursday night, November 21, at the Perry County Memorial Hospital. The primary purpose of the meeting was to discuss the possible hyphenation of Ste. Genevieve County with Perry County to form the Perry-Ste. Genevieve County Medical Society. Mr. Ray McIntyre, Field Secretary of the State Medical Association, was present to discuss details of the matter with us.

The attendance was small but interested.

If this proposal is favorably considered it will be referred to the Council of the Missouri State Medical Association for approval or disapproval.

Following a full discussion of the idea, the society adjourned taking the proposition under advisement.

A. E. MCDERMOTT, M.D., *Secretary*

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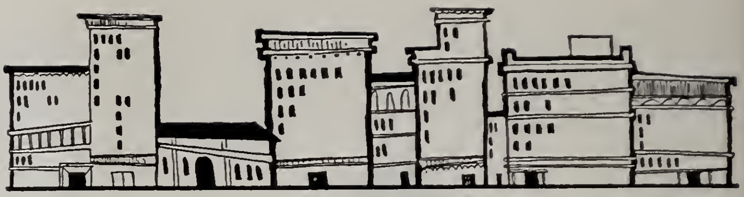

UNIVERSITY OF MISSOURI

Trips and Talks

Dr. Jerry William Brown, associate professor of Anatomy at the University of Missouri Medical Center, presented a paper entitled, "The Development of the Anterior Olfactory Nucleus in the Bat," on November 9 and 10 at the University of Alabama Medical Center in Birmingham. The meeting held there was the Committee on the Comparative Anatomy of the Nervous System and was attended by approximately 25 neuroanatomists, neurologists and neurosurgeons.

Dr. William T. Griffin, instructor in the Department of Obstetrics and Gynecology at the Medical Center, attended a symposium at Albuquerque, New Mexico. The meeting was sponsored by Medical Education for National Defense (MEND). The symposium was on "Medical Aspects of Nuclear Energy."

Dr. David G. Hall, professor and chairman, and Dr. Russell E. Hanlon, assistant professor, both of the Department of Obstetrics and Gynecology, attended a meeting of the Southern Medical Society in New Orleans on November 17 through 22. Dr. Hall discussed a paper by Dr. Alois Vasicka on: "Use and Abuse of Oxytocics."

Dr. R. L. Russell, associate professor of the Department of Physiology and Pharmacology at the Medical Center, attended a MEND sponsored program on Chemical and Biological Defense at the Army Chemical School, Fort McClellan, Alabama, October 14 through 19.

Dr. D. K. Meyer, professor of Physiology; Dr. M. L. Zatzman, associate professor of Physiology; Dr. J. L. Shields, instructor in Physiology; Mr. C. A. Robb and Mr. O. Lynn Webb, graduate students, attended a symposium on Transport Mechanisms, October 25 in St. Louis.

Dr. David G. McDonald, assistant professor of Clinical Psychology, attended the meetings of the Society for Psychophysiological Research, October 11 in Detroit, Michigan. Approximately 150 psychologists, psychiatrists and engineers attended the meeting.

Dr. Robert E. Froelich, assistant professor of Psychiatry and head of Medical Communications, attended a session on Advances in Photography in Medicine in Boston, Mass. on October 14 and 16. The Society of Motion Picture and Television Engineers sponsored the meeting.

Dr. Robert E. Froelich, assistant professor of Psychiatry and Dr. Rodman P. Kabrick, associate professor of Clinical Psychology, attended meetings dealing with Research into Medical Education, testing of students, and future of Medical Schools on October 28 through 30 in Chicago.

Dr. James M. A. Weiss, professor and chairman, and Dr. David Davis, associate professor, both of the Department of Psychiatry, were invited participants in an Institute on Training in Community Psychiatry, held at the University of Chicago, October 8 through 12. Representatives of 24 medical schools met to plan programs in the important new area of specialized training in community mental health. Following this meeting, Dr. Weiss served as an examiner for the American Board of Psychiatry and Neurology, and Dr. Davis was an invited guest at the organizational meeting of the Illinois Group Psychotherapy Association. Both of the latter organizations also met in Chicago (October 13 through 16).

Dr. James M. A. Weiss, professor and chairman, and Dr. Jacob O. Sines, associate professor of clinical psychology, both of the Department of Psychiatry, presented a paper titled "Actuarial Analysis of Age-Related Problems of Psychiatric Patients" at the 16th annual meeting of the Gerontological Society in Boston, Mass., Saturday, November 9. In this study, computer techniques were used to study relationships between personality characteristics and patterns on psychological tests in 532 patients seen on the psychiatric services at the University of Missouri Medical Center. This investigation appears to be the first large-scale project to demonstrate a clear-cut increase in frequency of depressive problems associated with age, and emphasized that depression, while relatively rare in childhood, becomes more common in each successive age group through old age. Dr. Weiss read the paper, and was invested as a Fellow of the Society at this meeting.

Dr. Robert E. Froelich, assistant professor of Psychiatry, Dr. Rodman P. Kabrick, associate professor of Clinical Psychology, Dr. Donald Kausch, assistant professor of Clinical Psychology, and Mrs. Grace Sudderth attended a meeting of the Missouri Association for Mental Health

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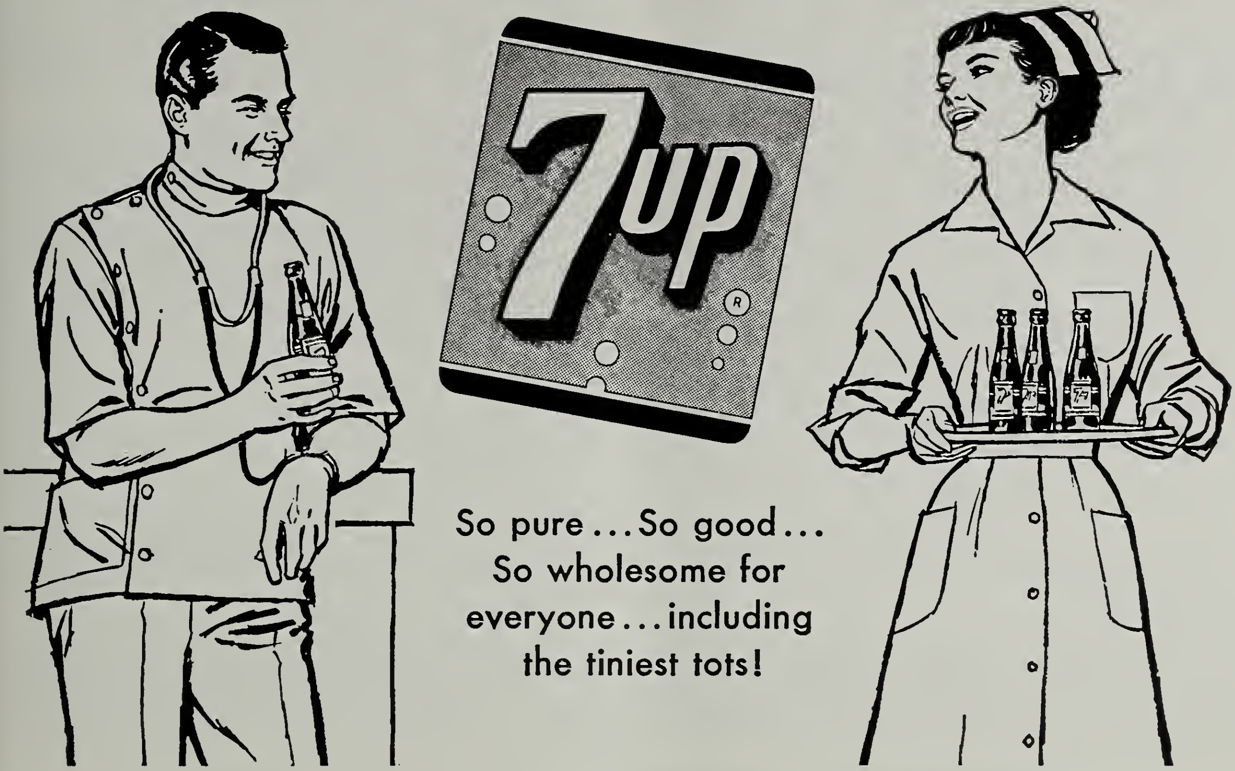

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in Jefferson City on October 10 and 11. Dr. Froelich attended as a resource person for group discussions of problems in this state. Dr. Froelich also attended a meeting at the Annenberg School of Communication in Philadelphia, Pa. on October 17. Communication of Medical Research Activities to the public, other researchers and practitioners was discussed at the meeting.

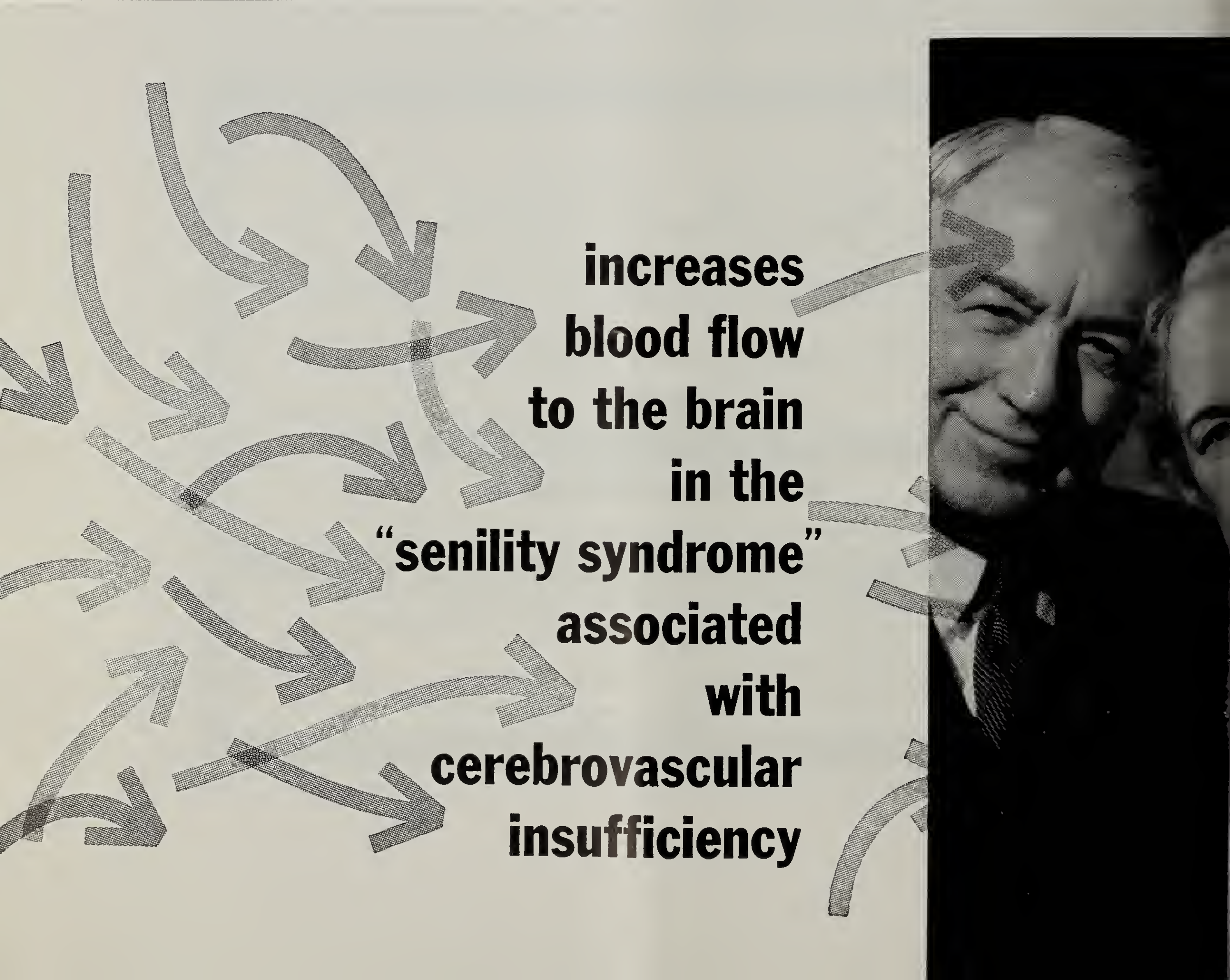
Dr. Gwilym S. Lodwick, asssociate dean of the School of Medicine and chairman of the Department of Radiology, will attend the Mid-Year meeting of the Trustees of the American Registry of Radiologic Technologists. Dr. Lodwick is Vice-President of this organization. The meeting will be held in Tucson, Arizona in late January. Also scheduled for January is a MEND conference to be held in Pensacola, Fla. Dr. Lodwick as MEND Coordinator for the University of Missouri Medical Center will attend the meeting. In February Dr. Lodwick will attend the Los Angeles Midwinter Radiologic Conference. He will participate with Dr. Ernest Aegerter of Philadelphia.

Dr. Wayne Mason, resident physician in Radiology, Dr. William Wilson, residing physician in Radiology; and Dr. Gwilym S. Lodwick, professor and chairman of the Department of Radiology, attended the meeting of the American Roentgen Ray Society in Montreal, Canada.

Dr. G. Ray Ridings, professor of Radiology (Radiation Therapy), recently attended a Cancer Seminar at Penrose Hospital in Colorado Springs and a meeting of University Hospital Cancer Coordinators in New York.

Dr. Gwilym S. Lodwick returned to Columbia after a dual engagement in Houston and Honolulu. In Houston, Dr. Lodwick, accompanied by Dr. Riding, Dr. Haun, Dr. Bartlett, Dr. Tam, and Dr. Mason, was a guest participant in a symposium on bone at the M. D. Anderson Hospital. From Houston, he traveled to Honolulu where he was a guest of the Pan-Pacific Surgical Association and presented talks on tumors of bone. He left November 22 for Chicago and the meeting of the Radiological Society of North America, where he displayed an exhibit on computer diagnosis. Also attending this meeting were Drs. Cochran, Weintraub, Haun, Simmons, Rall and Mr. George Koenig.

Dr. Gwilym S. Lodwick, professor and chairman of the Department of Radiology and associate dean of the School of Medicine, has also at-



tended meetings in Endicott, New York and Rochester, New York. In Endicott, he attended the IBM Clincial Symposium and delivered a talk on "Computer Analysis of Tumor Roentgenograms." The Rochester meeting related to Civil Defense and Medical Education for National Defense.

Dr. Henry McQuade, associate professor of Radiology, recently attended a Nuclear Reactor Symposium at Georgia Tech in Atlanta, Georgia.

Mr. George Koenig attended an Institute for X-ray technicians in Dallas, Tex. late in October. He moderated a panel discussion on "Organization and Problems of an Approved Training School."

Dr. Kenneth Keown, professor of Anesthesiology, presented his paper "Anesthesia for Open Heart Surgery" and was a member of a Panel on Treatment of Benign Chest Conditions at a meeting sponsored by the Pan-Pacific Surgical Association in Honolulu on November 3 through 10. His topic on this panel was "The Treatment of Acute Airway and Ventilation Problems."

Dr. G. W. N. Eggers, associate professor of Anesthesiology, and Dr. M. T. Metzgar, assistant professor of Anesthesiology attended the annual meeting of the American Society of Anesthesiologists in Chicago, November 1 through 6. Dr. Eggers presented a refresher course entitled "Effects of Surgical Positioning."

Four papers and two exhibits were presented by the faculty and resident staff of the section of Urology at the Colorado Springs meeting of the American Urological Association on October 14 through 17. Dr. Victor L. Robards, resident physician in Urology, presented "Septicemia and Shock in Urology" and was awarded first prize in the residents' essay contest. Dr. Edward L. Johnson, instructor in Surgery, was presented with a certificate of merit for his paper on "Induced Hypertension in Rats." The exhibit on "Renal Capsule Flap Pyeloplasty" prepared by Dr. Ian M. Thompson, professor of Surgery; Dr. Frank R. Michener, resident physician in Surgery, and Dr. Laszlo Kovacsi was awarded first prize for scientific exhibits.

Dr. Edward L. Johnson, resident physician in Surgery, and Dr. Ian M. Thompson, professor of Surgery, both of the Section of Urology, and Dr. Victor Carnes, of the Department of Pathology, will present a paper on "The Effect of Urea in Experimental Pyelonephritis" at the American

Inadequate cerebral blood flow—often due to cerebral arteriosclerosis—may result in the "senility syndrome" with its pattern of mental confusion, memory lapses, depression, fatigue, apathy and behavior problems.[1-3]

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REFERENCES: 1. Madow, L.: Penn. M. J. 62-861, June 1959. 2. Stieglitz, E. J.: Geriatric Medicine, ed. 2, Philadelphia, Saunders, 1949 p. 274. 3. Winsor, T., et al.: Amer. J. Med. Sciences 239:594, May 1960. 4. Eisenberg, S.: ibid, July 1960.

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College of Surgeons meeting in San Francisco. Also at the College meeting: Dr. Ian M. Thompson, and Dr. Gilbert Ross, assistant professor of Urology, presented exhibits delineating a new technique for the surgery of urethral stricture and a new operation for reconstruction of the uretero-pelvic junction.

On November 4 through 8 Dr. Ian M. Thompson was a guest speaker at the Pan-Pacific Surgical Association meeting in Honolulu, Hawaii. He spoke on the operation devised at the University of Missouri for urinary diversion, and participated in a panel on Urinary Incontinence. Also in Hawaii, Dr. Thompson discussed "Recent Developments in Urology" at a meeting of the Western Urologic Forum preceding the Pan-Pacific meeting.

Meetings

A total of 220 professional people attended the Fourth Annual M.D. Day held at the University of Missouri Medical Center, November 15 and 16. The total count was: Missouri–187, Colorado–1, Ohio–2, Illinois–7, Iowa–4, Kansas–6, Kentucky–1, Oklahoma–9, Oregon–1, Texas–1, and Florida–1. The meeting consisted of several scientific meetings Friday and Saturday in addition to a dinner Friday night and a luncheon Saturday noon.

ST. LOUIS UNIVERSITY

Mental Health Program

"Medical Practice and Mental Health," a practical approach for non-psychiatric physicians will be presented by the Saint Louis University Department of Neurology and Psychiatry six Tuesday mornings from 8:00 to 10:00 a.m., February 11 to March 17. The Continuing Medical Education Program is being presented with the assistance of the Advisory Council on Continuing Education in Mental Health at St. Louis University.

Fifty physicians can be accommodated in the six two hour sessions. Tuition fee is $35. Course director is Dr. Edward T. Auer, director, department of neurology and psychiatry and of the David P. Wohl Mental Health Institute. Sessions will be held in the Alexander Room of Rogers Hall, 3601 Lindell Blvd. Reservations may be made through Metropolitan College, Saint Louis University, 221 North Grand Blvd., or by calling Jefferson 5-3300, Ex. 355.

The six sessions will offer a concise, practice survey of the role of emotional factors in patient management, designed for internists, obstetricians, general practitioners, pediatricians, ophthalmologists, orthopedic surgeons and other non-psychiatric physicians.

Broad aim of the program is to assist each physician in adding to his understanding of the role of social and psychologic factors in the etiology, diagnosis and treatment of the cases ordinarily met in the consulting room. Emphasis throughout is on function and effect of emotional factors, rather than on theory or history of psychiatry.

Lecturers in the program are drawn from the St. Louis University Medical Center, the Department of Neurology and Psychiatry, the Department of Pediatrics and Cardinal Glennon Memorial Hospital for Children.

Lecture titles, participants and date of presentation are: "Comprehensive Medical Care and the Doctor-Patient Relationship," Dr. Arnold Block, assistant professor of clinical neurology and psychiatry, February 11; "From Infancy to Senility—The Evolution of Emotional Problems Through the Lifespan," Dr. Robert J. Corday, assistant professor of psychiatry and child psychiatrist at Cardinal Glennon Memorial Hospital, February 18; "Sex and Marriage: Pre-Marital and Marital Counseling, The Unwed Mother," Dr. Edward Auer, February 25; "Suicide, Depression and Related States," Dr. Robert James Leider, assistant professor of psychiatry, March 3; "The Use and Abuse of Drugs in the Management of Emotional Problems," Dr. Richard Quick, instructor in psychiatry, March 10; Summary and Review: "A Case Study of Mental Retardation and Its Effect on the Total Family Situation," panel, Dr. Corday, chairman; Dr. Austin R. Sharp, assistant professor of pediatrics and acting director of the department of pediatrics and pediatrician-director, Child Development Clinic; Dr. Allan G. Barclay, assistant professor of psychology and chief psychologist, Cardinal Glennon Hospital; Audrey M. Thaman, clinical social worker; Mrs. Marian M. Joltgrewe, public health nurse consultant.

Appointments

The following faculty appointments have been announced by the Rev. Edward J. Drummond, S.J., vice president for the Medical Center at St. Louis University.

Associate Professor: Dr. Harold J. Nicholas, biochemistry.

Assistant Professor: Dr. Robert J. Corday, psychiatry; Dr. Joan Finkle de Pena, anthropology in the Department of Anatomy; Dr. Werner

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*Donnelly, J.: A.M.A. Arch. Environmental Health 6:697, June, 1963

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Fischleschweiger, anatomy; Dr. Julius T. Hansen, physiology; Dr. George C. Kaiser, surgery; Dr. Harry G. Moore Jr., clinical psychiatry; Dr. Howard Yanof, physiology.

Senior Instructor: George Benson, clinical neurology and psychiatry; Dr. Anthony L. Ferro, psychiatry; Dr. Thomas K. Mangelsdorf, psychiatry; Dr. Ivan Sletten, psychiatry; Dr. Elliot A. Wallach, dermatology.

Instructor: Dr. Ralph L. Biddy, psychiatry; Dr. Bernell Coleman, physiology; Dr. Robert M. Donati, internal medicine; Sister Wilma Marie Haslag, S.S.M., physiology; Dr. John R. Hogan, internal medicine; Dr. Henry Hurd, orthopedic surgery; Dr. LeRoy L. Fink, surgery; Dr. John McDonough, internal medicine; Dr. Emil Frederick Miskovsky, internal medicine; Dr. Harold J. Ott II, obstetrics and gynecology; Dr. Raymond E. Probst, gynecology and obstetrics; Dr. Robert T. Quick, psychiatry; Dr. Paul Ritter, gynecology and obstetrics; Dr. Joseph S. Shuman, psychiatry; Dr. Takeo Tsunekawa, surgery; Dr. Edward M. Wittgen, orthopedic surgery; Dr. Ralph E. Woods, gynecology and obstetrics.

Assistants: Dr. Raymond J. Beidle, pediatrics; Dr. Joseph Boveri, gynecology and obstetrics; Miss Natalie Ann Connors, anatomy; Dr. John D. Goldkamp, pediatrics; Dr. Raymond Hellweg, pediatrics; Dr. George E. Humphrey, radiology; Dr. Paul N. Meiners, surgery; Dr. Hassan Nouri, gynecology and obstetrics; Dr. Edward S. Rader, urology; Dr. Herman Shyken, radiology; Dr. Edward Zukowski, radiology.

Research Associate: Harry C. Eschenroeder, D.V.M., surgery; Dr. Hiroshi Fukaya, physiology; Dr. Kenkichi Oho, surgery and Takeshi Seno, microbiology.

The Rev. J. Willis Averill, S.J., has been appointed counselor for nursing and medical students with offices at the St. Louis University School of Medicine.

Father Averill is former assistant dean of men at Creighton University in Omaha, where he taught philosophy and theology from 1944 to 1953. While in Omaha, he also was visiting chaplain for the psychiatric ward at St. Joseph's Hospital.

Mr. William N. Jones has been appointed controller of St. Louis University Hospitals, it has been announced by Mr. John B. Warner Jr., director, St. Louis University Hospitals.

Mr. Jones formerly was associated with the firm of Kerber, Eck and Brackel as accountant. He holds a bachelor of science degree in commerce awarded by St. Louis University in 1956.

In his new position, Mr. Jones will serve as controller for Firmin Desloge Hospital and David P. Wohl Memorial Mental Health Institute.

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In the News

Dr. Maurice Green, professor of microbiology, St. Louis University School of Medicine, delivered a paper entitled "Biochemistry Studies on Human Tumorigenic Adenoviruses" before the Southwest Section of the American Association for Cancer Research, which met in Houston, Texas November 8 and 9. He also spoke at Baylor University on the same subject on November 7.

Dr. Rene Wegria, director, department of pharmacology, recently lectured on his new investigation concerning the "Pathogenesis of Cardiac Edema" at the Columbia University College of Physicians and Surgeons in New York City.

Dr. Armand E. Brodeur, associate professor of radiology, addressed the American Public Health Association in Kansas City on Nov. 14.

Dr. C. Rollins Hanlon, director, department of surgery, attended the meeting of the Western Surgical Association held in Galveston, Texas, on November 22.

Dr. Daniel Sexton, associate professor of clinical medicine, was honored as president of the Southern Medical Association by St. Louis University medical alumni in New Orleans on November 19.

Award

Robert G. Trinity, a junior student at the St. Louis University School of Medicine, has been awarded the annual Roche Award presented by Roche Laboratories.

Trinity has received a gold wrist watch and scroll, embossed with the seal of the St. Louis University School of Medicine.

The award is presented annually to a medical student who has completed two years of study, in recognition of outstanding scholarship, character and personality.

Trinity was awarded his Bachelor of Science degree in 1961 by Loyola University in Los Angeles. He is a member of Phi Chi Medical Fraternity.

School Press Workshop

The School of Medicine served as host to editors of high school papers in St. Louis and St. Louis County on Oct. 30. The 27th Annual School Press workshop was sponsored by Columbia Scholastic Press Association, National Tuberculosis Association and the Tuberculosis and Health Society of St. Louis. The program included a welcome by Dr. John P. Wyatt, director, department of pathology, and a tour of the department by Dr. Richard Dames, assistant to the dean. Dr. Chao Sun, assistant professor of

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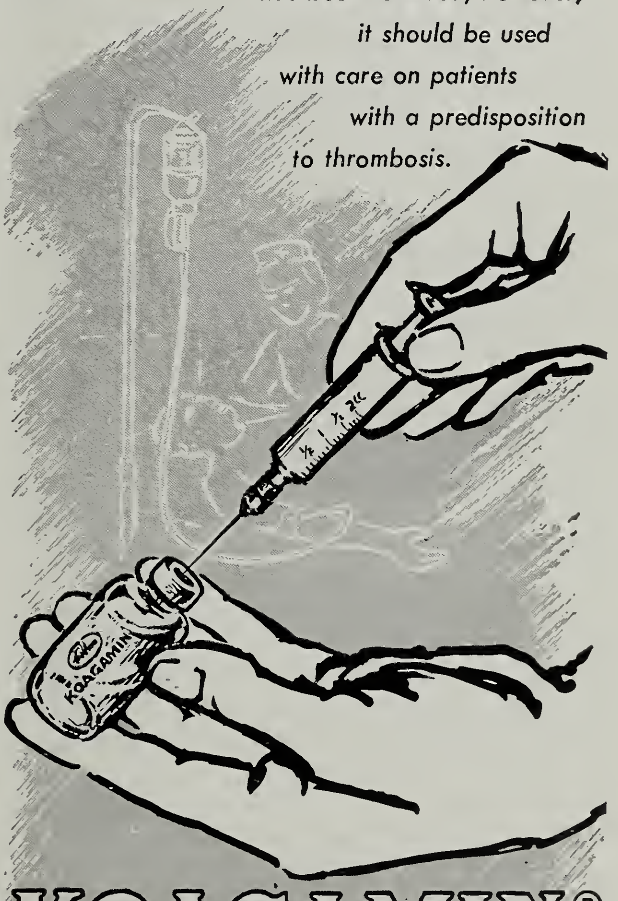

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pathology, demonstrated the electron microscope. Dr. Dames spoke to the group on "Health Careers" and participated in a question and answer session. Rex Davis, News Director of KMOX radio, spoke on "How to Produce News Stories, Features and Editorials."

ELLIS FISCHEL STATE CANCER HOSPITAL

Dr. Rupert B. Turnbull, Chief of Proctology and Colon Surgery, Cleveland Clinic, was visiting surgeon October 18, 1963.

The Combined Conference of the American Cancer Society, Missouri Division, and the Consulting Staff of the Ellis Fischel State Cancer Hospital was attended by the Consulting Staff and referring physicians October 19-20, 1963.

Dr. John S. Spratt, Chief Surgeon, attended the Clinical Congress of the American College of Surgeons in San Francisco as Liaison Fellow from Missouri, Committee on Cancer, October 28-November 1, 1963.

Dr. John S. Spratt, Chief Surgeon, was Guest Panelist at the 15th Annual Cancer Seminar, Penrose Cancer Hospital, Colorado Springs, Colorado, November 2, 1963. The subject of the panel was intestinal neoplasms.

Dr. William Shieber, St. Louis, Missouri, demonstrated pelvic lymphangiographic techniques to the resident staff of the Ellis Fischel Hospital, November 14, 1963.

Dr. A. McChesney Evans, Chief of Internal Medicine at the Ellis Fischel State Cancer Hospital addressed the Morgan County unit of the American Cancer Society at Versailles, Missouri on November 15, 1963. He spoke at the new City Hall Building on the subject "Cancer Research and the American Cancer Society."

Dr. Raul Mercado and Dr. Jose Castells, Radiotherapists at Ellis Fischel State Cancer Hospital, recently attended the Radiological Society of North America Meeting in Chicago, Illinois. Dr. Castells was co-author of a paper with Dr. Isadore Meschan of Winston-Salem, North Carolina concerning "Studies on D.N.A. Synthesis in Regenerating Rat Liver," which was presented at the meeting.

Dr. Jose M. Sala, former Radiotherapist at Ellis Fischel State Cancer Hospital, presented a paper "The Detection and Treatment of Post-Irradiationally Recidivated Carcinomas of the Cervix Uteri" which was prepared here by Dr. Ronald K. Gary, Dr. John S. Spratt and himself.

Dr. Carlos Perez-Mesa, Pathologist at Ellis Fischel State Cancer Hospital, presented a paper entiled "Hormonal Influences on Testicular Morphology," written in collaboration with Dr. Marvin W. Woodruff, Chief of Urology, Roswell Park Institute, Buffalo, New York, at the conference of the Northeastern Section of the American Urological Association, held at the Chateau Frontenac Hotel, Quebec City, Canada, September 22-25, 1963.

SABIN ON SUNDAY IN METROPOLITAN ST. LOUIS

Sunday, November 24, 1963, was the date when an estimated 308,000 St. Louisians and St. Louis Countians received the first of two oral Sabin vaccines. The second dose is to be given on Sunday, January 26, 1964.

The Sabin on Sunday campaign was made possible by the cooperation of the St. Louis City and St. Louis County Medical Societies. The doctors of the area, numbering about 2,000, donated their services, as did some 14,000 other ancillary workers at the 190 vaccine stations in St. Louis and St. Louis County. Many of the public and parochial schools scattered throughout the area were used as the vaccine stations.

Though the number receiving the vaccine fell short of the anticipated 600,000 goal, the drive was considered a success. In a statement released to the press, City-County Medical Charities, Inc., formed by the two St. Louis area medical societies to handle the program, had this to say: "We are most happy that so many participated in the program, considering the public's concern and mourning over the death of President Kennedy. We have immunized more than 300,000 of our fellow citizens. We are particularly grateful as members of area medical societies to the thousands of community minded St. Louis area residents who joined us in donating their services to make this campaign a possibility."

Voluntary contributions of 50 cents per dose were requested to help defray the costs of the vaccine and distribution, however, no one was refused the vaccine who could not pay the small contribution.

NEW MEMBERS

Daniel D. Beard, M.D., 1431 Claytonia Terrace, St. Louis, has become a member of St. Louis Medical Society. Dr. Beard is a native of Decatur, Illinois, received his preliminary education at DePauw University, and his M.D. degree as Washington University in 1961. He specializes in internal medicine.

Richard J. Kloecker, M.D., 9616 Lackland Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Kloecker is a native of Omaha, Nebraska, received his preliminary education at Notre Dame University, and his M.D. degree at Loyola University in 1954. He specializes in surgery.

R. W. Litwiller, M.D., 905 Virginia Ave., Columbia, has become a member of Boone County Medical Society. Dr. Litwiller is a native of Morton, Illinois, received his preliminary education at Goshen and University of Chicago, and his M.D. degree at Loyola University in 1945. He specializes in general practice.

Amando Menendez Jr., M.D., 11084 Eckelkamy Drive, St. Louis, has become a member of St. Louis Medical Society. Dr. Menendez is a native of Havana, Cuba, received his preliminary education at Marti Academy and his M.D. degree at Havana Medical School in 1956. He specializes in pathology.

Nolan B. Pitsinger, M.D., 5502 Delmar Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Pitsinger is a native of Dayton, Ohio, received his preliminary education at the University of Dayton, and his M.D. degree at St. Louis University in 1960. He specializes in surgery.

Thomas J. Ridzon, M.D., 625 Lammert Ct., St. Charles, has become a member of Lincoln-St. Charles County Medical Society. Dr. Ridzon is a native of Bergholz, Ohio, received his preliminary education at Western Reserve University, and his M.D. degree at St. Louis University in 1959. He specializes in internal medicine.

J. William Thompson III, M.D., 524 Warder St., University City, has become a member of St. Louis Medical Society. Dr. Thompson is a native of St. Louis, Missouri, received his preliminary education at Amherst College, and his M.D. degree at St. Louis University in 1954. He specializes in thoracic surgery.

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Missouri Medical Meetings

Missouri State Medical Association, Hotel Chase, St. Louis, March 8-11, 1964.

Missouri Academy of General Practice, Hotel Chase, St. Louis, Oct. 31-Nov. 1. 1964.

Component Society Meeting Dates

Audrain County Medical Society—third Monday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler-Ripley-Wayne County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month, September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—fourth Tuesday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—first Tuesday of each month at the St. Francis Hospital, Washington, at 7:00 p.m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb)—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—March, May, October and December.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets fourth Tuesday of each month.
Johnson County Medical Society—meets only on call.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p.m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Lincoln-St. Charles County Medical Society—fourth Tuesday of each month.
Marion-Ralls-Shelby County Medical Society—third Tuesday of each month, 7:30 p.m.
Mid-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)—fourth Thursday of each month.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Nodaway-Holt-Atchison-Gentry-Worth County Medical Society—second Tuesday of each month.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)—second Tuesday of each month, September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month, September through May.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—third Tuesday of each month, October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month, September through May.
South Central Counties Medical Society (Howell-Oregon-Texas-Wright-Douglass-Ozark)—fourth Wednesday of each month.
Webster County Medical Society—meets only on call.
West Central Missouri Society (Bates-Cass-St. Clair-Vernon-Cedar)—second Thursday of each month.

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Some of these associated metabolic reactions made it risky or otherwise undesirable to treat with steroids large numbers of patients in various categories who would otherwise have benefited from such management. These “untreatables” were overweight, had cardiac disease, hypertension, or pulmonary fibrosis associated with congestive heart failure. Also in this category were those patients whose emotional symptoms were aggravated by earlier steroids.

But the advent of ARISTOCORT® Triamcinolone in 1958—the result of biochemical and pharmacologic research which successfully stripped away many important undesirable hormonal effects from the primary anti-inflammatory action—dramatically changed this picture. This steroid did not overstimulate the appetite, or cause the excessive weight gain induced by other steroids;[2-7] it proved to have one of the best records of any steroid for *not* causing edema, or salt-and-water retention;[2,3,7-10] and the incidence of undesirable euphoria with this agent was remarkably low.[2,4,5,9,10] What is most significant is that these benefits have stood the test of more than 5 years of widespread use. And, of course, the avoidance of these distressing hormonal effects benefited *all* patients requiring steroids, not just those in the special categories, as demonstrated by wide clinical use.

Side Effects. Since it may, under some circumstances, produce any of the unwanted effects common to all cortisone-like drugs, discrimination should always be exercised in administering ARISTOCORT® Triamcinolone. Any of the Cushingoid effects are possible, as are purpura, G.I. ulceration, increased intracranial pressure and subcapsular cataract. Corticosteroids generally may mask outward signs of bacterial or viral infections. Catabolic effects to watch for include muscle weakness and osteoporosis. Weight loss may occur early in treatment but is usually self-limiting.

Contraindications. While the only absolute contraindications are tuberculosis and herpes simplex, there are some relative contraindications (peptic ulcer, glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

While no steroid can *cure* a susceptible disorder, many patients who would otherwise be confined in a state of invalidism have, on ARISTOCORT® Triamcinolone, been able to pursue active, useful lives.

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Missouri Medicine in Review

FORTY YEARS AGO

An endowment of $650,000 has been appropriated to the St. Louis Maternity Hospital by the General Education Board founded by John D. Rockefeller. The donation is contingent upon the erection of a new building for the hospital to cost $500,000, to be paid for by subscriptions from other sources.

News dispatches from Liberty, Mo., state that the Clay County grand jury has indicted 16 persons presumably for practicing medicine without a license. Most of the evidence in the cases was obtained through Clay County Medical Society.

The Board of Aldermen of St. Louis are considering an ordinance authorizing the Hospital Commissioner to require patients admitted to the City Hospital to pay $2.20 a day for their care when it is found that the patients are able to do so.

Dr. David Preswick Barr, of Cornell University, has been appointed Busch professor of medicine in Washington University Medical School and physician in chief to the Barnes Hospital. The appointment will become effective February 1, but Dr. Barr will not assume active duties in the school until September.

Dr. Johannes Fibiger, professor ordinarius in pathological anatomy at the University of Copenhagen, has demonstrated, following repeated experimentation, that parasites play an important role in the formation of certain types of tumors in the preventriculi of rats. Furthermore, he has succeeded in effecting papillomata and undoubted carcinoma through the parasite nematode.

TWENTY-FIVE YEARS AGO

Drs. Millard F. Arbuckle and Brian Blades, St. Louis, were guests of the Southwest Missouri Medical Society at Springfield on December 2.

The Hodgen Lecture, sponsored by the St. Louis Surgical Society, will be presented on January 10. Dr. F. T. Coller, Ann Arbor, Professor of Surgery, University of Michigan, will present the address on "Studies on Altered Chemistry in Surgical Patients."

The honor roll, composed of component societies all of whose members paid dues for the current year, was creditably long at the close of 1938. Jackson County Medical Society, for the first time since 1933, reported all members paid for the current year. County societies on the honor roll are Jackson, Chariton, Perry, Ste. Genevieve, Camden, Webster, Montgomery, Dent, Miller, Moniteau, Morgan, Macon, Pulaski, Howard, Andrew, Bates.

Dr. M. Pinson Neal, Columbia, was installed as president of the Mississippi Valley Medical Society at the annual meeting of the society at Quincy, Ill., in November. Missouri members elected to offices in the society are Dr. Joel W. Hardesty, Hannibal, first vice president; Drs. W. L. Hanson and Q. U. Newell, St. Louis, Edmund Lissack, Concordia, Dan G. Stine, Columbia, and F. E. Sultzman, Hannibal, members of the board of directors.

The Missouri State Medical Association will submit to the January, 1939 General Assembly of Missouri a fair and impartial basic science act which would require a uniform standard of training for all who wish to practice the healing art.

Tularemia has been a subject of considerable interest in the state during the last several weeks. The State Health Commissioner, through the daily and weekly press, warned Missourians to exercise special care in dressing rabbits and quail and to call a physician whenever symptoms appear. A few fatalities have been reported.

Construction of the new State Trachoma Hospital at Rolla has been started. This will be the only state hospital maintained exclusively for the treatment of trachoma patients. The contract calls for an expenditure of $104,575. Dr. J. E. Smith is superintendent of the Trachoma Hospital.

TEN YEARS AGO

In a dignified atmosphere of almost perfect equanimity and without recourse to action encouraging unwanted publicity or pictures in the

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Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet. Colored illustrations will be used when suitable if author assumes the actual cost.

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WASHINGTON

Proposals to provide limited health care for the aged under social security continue to be the most important legislation before Congress so far as the medical profession is concerned.

In his State of the Union message to Congress, President Johnson labeled it "must" legislation and asked for Congressional approval before the end of this summer.

The House Ways and Means Committee late in January wound up hearings on the King-Anderson bill, the Administration's medicare legislation. The hearings had been interrupted by President Kennedy's assassination.

The committee—with a majority of its members believed to still be opposed to such legislation—did not indicate immediately when it would act further on the bill.

In commenting on the State of the Union message, Dr. Edward R. Annis, President of the AMA, said that President Johnson apparently had been misinformed by his advisers on the legislation.

"Medicare would not be an insurance program for health care for the elderly, and workers would not contribute to a fund for their old age," Dr. Annis said.

"Medicare would be strictly a tax program, forcing wage earners to pay a substantial increase in their payroll taxes to finance hospitalization for everyone over 65, including those who are wealthy and millions of others who already are protected with hospital insurance.

"The President has also been misinformed on the cost of such a program. Testimony of the Chief Actuary of the Social Security Administration before the Ways and Means Committee in November shows that every worker earning one hundred dollars or more a week would be forced to pay at least 23 per cent more in payroll taxes to finance this inequitable program.

"Medicare is unnecessary. Private health insurance, now protecting more than 10 million elderly, is available to those who can pay their own way, and the Kerr-Mills Law, already enacted in more than 40 states, can help those who need help."

Other legislative proposals of interest to physicians include:

An amendment to the Keogh law that would remove the present 50 per cent limitation on the amount of income tax deduction a self-employed person can claim on his annual retirement savings. It also removes the $2,500 or 10 per cent of income limitation on the amount of retirement savings an individual with employees could use for tax deduction purposes. This would be a tremendous boost for the Keogh program and for self-employed persons with retirement savings plans.

Rep. Eugene Keogh (D., N. Y.) and Sen. George Smathers (D., Fla.) are sponsoring the amendment.

The Internal Revenue Service recently issued a tentative ruling that was a setback to physicians and other professional men planning to band together into corporations for tax purposes. A proposed regulation stated that such professional organizations must have all of the characteristics of a business corporation in order to qualify for corporation tax treatment, which would be virtually impossible for a group of professional men.

The regulation would knock out the so-called Kintner regulations of 1960 under which IRS stated that associations of professional men would be classified for tax purposes as corporations provided certain corporate characteristics were followed and provided that state law authorized establishment of the groups as corporations.

The IRS proposal is not final and will be the subject of hearings at a later date. It appears certain to be the subject of court litigation, if made final.

A civil defense bill that has passed the House and is before the Senate would provide a $190 million program of grants to hospitals and other non-profit institutions for building fall-out shelters. These shelters could be used as garages, storage areas and such in peacetime.

An Administration proposal would require clearance and approval of new medical devices, which means anything from a new type of forceps to the most complicated radiation device. FDA would rule on the efficacy as well as the safety of such devices, as it does now on new drugs.

An amendment to the medical education law would forgive part of the repayment of federal loans to students if the young physician settles in a physician-shortage area.

Last year Congress cut the National Institutes budget request by $12 million in approving $918 million for NIH. This was the first time in recent years Congress has failed to substantially increase the NIH budget request of the Administration.

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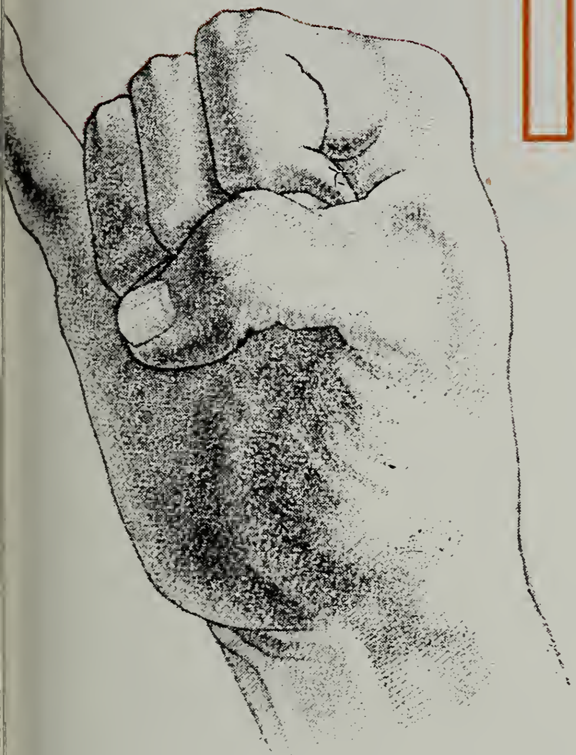

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SUPPLY: Arthralgen (white, scored) and Arthralgen-PR (yellow, scored) tablets are available in bottles of 100 and 500.
*Cohen, et al: J.A.M.A., 165:225, 1957.

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Missouri's Voting Law Better Than Some

Missouri is one of 16 states which have enacted, introduced or are planning legislation to reduce or waive minimum residency requirements for new residents. Twelve of these states have a residence requirement of six months for newcomers, while Missouri requires one year.

An article in the January issue of *Today's Health* estimates that outmoded registration and election laws keep millions of eligible voters from the polls.

"A paper curtain, in the form of outmoded registration and election laws, keeps many of our most responsible citizens from voting," the article states.

"In 1960, it is estimated, at least 20 million Americans—half of all those of voting age who did not vote—were disfranchised in this manner.

"They included persons who were ill, confined to nursing homes or other institutions, were traveling on business or vacation, or were victims of racial discrimination. But the largest group—an estimated eight million persons—had done nothing more unusual than move in the weeks and months preceding election day, and then found themselves denied an opportunity to register and vote in either their old or new places of residence."

A "shocking proportion" of Americans—perhaps one third of the electorate—will not vote in the next presidential election in November 1964, the article said. Only 63.9 per cent of all Americans of voting age voted in 1960, one of the most closely fought presidential races in history, it said. Less than half the electorate, 44.8 per cent, turned out two years ago for the congressional elections, it said, and participation in state and local primaries is still lower.

Interviewed for *Today's Health* in an effort to discover the reasons why voters do not vote were public officials, leaders of both the Democratic and Republican parties, the staff of a specially appointed Presidential Commission on Registration and Voting Participation, representatives of nonpartisan groups such as the American Heritage Foundation, League of Women Voters, Kiwanis and other major service club organizations and groups.

Both the American Heritage Foundation and the Presidential Commission reported that they found that in millions of cases of nonvoting neither apathy nor bad citizenship were the primary factors. The executive director of the American Heritage Foundation said "Despite modern communications and active party organizations which quickly make citizens aware of the issue, 37 states still require one year residence in the state, one demands two years and 12 call for six months. County and precinct requirements often are just as unreasonable. In Philadelphia, where our constitution was born, for instance, and in other cities you can lose your vote merely by moving across the street to a new precinct a month or so before election day. This situation, to my mind, is a national scandal."

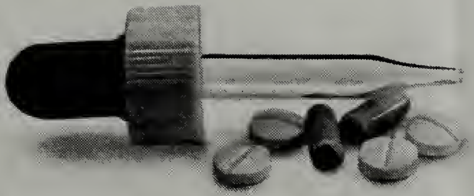
Horse-and-buggy registration procedures also are inhibiting, the article pointed out. Most states restrict registration to a central office in each county, at designated hours, and most close registration from one to nine months in advance of the election, long before interest has reached its peak.

In most states, absentee voting provisions are equally archaic, according to the article. This would not include Missouri, however.

States which have streamlined even part of their election laws far exceed the national average in voting, it was pointed out.

"Idaho, for example, one of the most progressive states in election administration, registered 97.4 per cent of its electorate in 1960, and got out 80.7 per cent of the vote—best record in the nation," it said. "Washington was not far behind with 72.3 per cent turnout.

"In both states, instead of requiring citizens to remember and find time to report to a registration office weeks before the election, paid registrars seek them out and sign them up. Residence requirements are liberal, and in Idaho, registration continues until 9:00 p.m. on the Saturday before a Tuesday election."



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C. G. STAUFFACHER, M.D., Secretary

Missouri Academy of General Practice

The 17th annual installation of officers and dinner dance of the St. Louis Academy, on Saturday night, December 7, rated par excellence. More than 200 members, wives, friends and guests enjoyed an evening of relaxation, entertainment, good food and drink, dancing and "just visiting" at the Missouri Athletic Club on this memorable occasion.

Dr. Lois Wyatt, retiring president, presided and then turned over the gavel to the incoming president, Dr. Charles Nester. Other officers installed were: Dr. Barney Finkel, president-elect; Dr. Paul Parashak, vice president; Dr. Charles Ladd, secretary; Dr. Ernest Schaper, treasurer. Dr. Walter T. Gunn, immediate past president of the Missouri Academy was introduced from the floor and warmly congratulated on his recent election to the office of president-elect of the St. Louis Medical Society.

On Sunday, December 15, a meeting of the Education Committee of the MAGP was held in Jefferson City. This session was primarily held to initiate plans for the program of the 1964 Annual Scientific Assembly of the MAGP, to be held at the Chase Hotel in St. Louis, on Saturday and Sunday, October 31 and November 1. Those attending the committee meeting were: Drs. Karraker, Farmington, Chairman; Hamlin, Hannibal; Eisenmann, New Haven; Roberts, Sweet Springs; Stelmach, Kansas City; Wolcott, Columbia; Dr. Carrier, Kansas City, President of MAGP; Dr. Stauffacher, Sedalia, Secretary of MAGP; Drs. Allen and Belden, Jefferson City, Missouri Division of Health, and Mr. Ray McIntyre, St. Louis.

Attending the committee meeting were (left to right) Drs. Hamlin, Eisenmann, Carrier, Roberts, Karrarker, Stelmach, Wolcott, Stauffacher and Allen.

The committee agreed to follow the format of previous annual meetings; namely, the presentation of four symposia over the two day period. Panel discussion will close each symposium. On Saturday morning, October 31, the symposium will be on "Allergy"; on Saturday afternoon on "Pediatrics." A "General Scientific Session" will be held on Sunday morning, November 1. The concluding symposium on Sunday afternoon will cover current concepts in the use of hormones.

MISSOURI STATE MEDICAL ASSOCIATION

106th Annual Session

Hotel Chase-Park Plaza, St. Louis

March 8, 9, 10, 11, 1964

Why James Wong says he'll do anything to help sell U.S. Savings Bonds

A few years ago, in a village in central China, the local communist bosses held kangaroo court and found James Wong's father guilty of being a landlord. The penalty was death and confiscation of all belongings.

Among those belongings were $850 worth of U.S. Savings Bonds that the senior Mr. Wong had purchased when he was a defense worker in this country during the second world war.

His son, James, of San Francisco, who was named beneficiary, explained the situation to the Treasury Department. After verifying the facts, they paid the full amount plus interest.

James Wong, like many other Americans, is sold on the safety of U.S. Savings Bonds. But far more important to him is the fact that Savings Bonds help protect us from the kind of tyranny that killed his father.

Tens of millions of Americans are building the strength of their country as they save for their own future by buying Bonds.

Mr. Wong urges you to join them.

Quick facts about U.S. Savings Bonds

- You get $4 for every $3 at maturity
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Woman's Auxiliary

In a recent address to the AMA House of Delegates in Portland, Ore., Mrs. C. Rodney Stoltz, National President, spoke of the need for increased support from county medical societies for the activities and programs of the auxiliaries. Recognition and mutual respect, one for the other, with areas for actual cooperative work will mean a greater contribution by the doctor's wife to her community. This last year when "Operation Hometown" was conceived, the medical societies were asked to contact the auxiliaries for help in waging the campaign against "Fedicare." This was not done, but it is not too late! Since the hearings on the King-Anderson Bill were postponed, there is still time to send "a deluge of expression from the grass roots of this nation reaching Washington in such volume it cannot be ignored" as Dr. Annis requested recently.

Mrs. L. S. Crispell

At the Fall Conference in October, the Board accepted a recommendation that we promote a better liaison between the Auxiliary and students' and interns' wives at the medical schools. In one of the recent publications I received, I noted that the members of the Denver, Colo., Auxiliary invite the wives to have their meetings in their homes. This could apply to other student organizations and would certainly fit our theme of "Serve and Communicate."

Throughout my year, I have been fortunate to have the cooperation of Dr. Kenneth Hollweg, President of the Missouri State Medical Association, whenever I requested it. Following a discussion held during his visit to our Fall Conference, he referred our comments to the Council meeting held in December. Their Council took the following actions affecting the Auxiliary. Hereafter, the Association will mail copies of the MISSOURI MEDICINE annual July roster directly to the members of our Executive Board; and it will assist with some of the printing and mailing of stationery and our own four page roster in the spring. Their Council also accepted the recommendation that the Auxiliary Medical Advisory Council will be composed of three members—the immediate past president of the Missouri State Medical Association, the Chairman of the Council and the Councilor from the district of our President. This will be an excellent and informed group to advise us and we are grateful the proposal met with approval.

During December, I made the last of the trips for the year. I enjoyed Christmas luncheons with Clay, Pettis, St. Louis City and Marion-Ralls-Shelby auxiliaries and a dinner meeting with Johnson County. Each of these groups have worked on AMAERF either included in their dues or as separate collections. The Marion-Ralls-Shelby auxiliary made an additional donation that day in my honor. These auxiliaries have also collected sample drugs and other materials as well as money for IHA agencies adding their names to many of the other groups who are supporting the project this year. St. Louis City members have worked on TB, Diabetes, Safety and Polio Vaccine drives and are now getting ready to be Convention hostesses.

Now that the holidays are over, plans are under way on the details of the Convention to be held at the Chase Hotel in St. Louis, March 8 to 11. I hope to see the best turnout ever for the annual meeting and know you will enjoy the hospitality arranged by the St. Louis City Auxiliary. See you in March!

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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LOUIS L. TUREEN, M.D., *and*
ROBERT M. WOOLSEY, M.D., *St. Louis*

Some Psychiatric Aspects of Convulsive Disorders

The emotional manifestations of epilepsy patients, both those of personality disturbances and reactions to being afflicted with epilepsy are discussed.

Dr. Tureen and Dr. Woolsey are on the faculty in the Section of Neurology, Department of Neurology and Psychiatry of St. Louis University School of Medicine.

The emotional manifestations accompanying convulsive disorder which are commonly observed clinically represent symptoms of personality disturbances which may be either manifestations of the seizures themselves or reactions to being afflicted with epilepsy. Of course both may exist simultaneously. It is our intention to discuss both aspects of these emotional manifestations which are important in the correct interpretation of the symptoms and the management of this disorder. On the one hand, the ictal and interictal phenomena may represent a significant psychiatric disorder related to the cerebral dysrhythmia; on the other, they may represent problems of adjustment to the convulsive disorder arising from conflicts at an intrapersonal, interpersonal or social level which require attention in an effective plan of treatment. We believe that many neurologists and psychiatrists, as well as family physicians, are insufficiently concerned with these aspects of epilepsy.

Primary psychiatric symptoms[1] representing manifestations of paroxysmal discharges are frequently not recognized as such, unless accompanied by convulsions or a history of seizures. Both adults and children may exhibit such symptoms. These symptoms correlate with simultaneous seizure patterns observed in the electroencephalograms obtained during the periods of abnormality. Within hours or days after the psychiatric symptoms have abated, the EEG tracing may revert to the interictal pattern or even to normal. The attacks characteristically appear suddenly and terminate abruptly.

The association of psychiatric symptomatology with convulsive disorder is by no means new. John Hughlings Jackson[2] in the latter part of the nineteenth century, was probably the first to ascribe such symptoms as disturbances of consciousness, hallucinations, illusions and emotional experiences and automatisms to an epileptic cause. He also noted the association of such symptoms with organic brain disease and, on the basis of two autopsied cases, localized the critical area to the medial aspect of the temporal lobe. He referred to this type of seizure as "an uncinate fit."

Further development awaited Berger's publication of his discovery of the human electroencephalogram in 1929. In 1937 Gibbs and Lennox[3] reported a series of seven patients having symptoms similar to those described by Jackson associated with generalized high voltage

3 to 7 per second "square topped" waves in the electroencephalogram. Subsequent studies by them and other investigators revealed that the electroencephalographic abnormalities were primarily located in the temporal regions of the cortex.

Because of the combination of altered consciousness, illusions and emotional experiences together with automatisms which constitute the symptoms of these seizures, Gibbs and Lennox[4] initially suggested that they be called "psychomotor seizures." Because of the association of such symptoms with demonstrable pathology of the temporal lobes and because of the localization of the EEG abnormality to this area, Lennox[5] later suggested that "temporal lobe epilepsy" might be a better term.

Stimulation of the cerebral cortex in conscious patients at craniotomy by Penfield[6] and his group at the Montreal Neurological Institute did much to further elucidate the localization of such symptoms to the temporal lobe.

Temporal lobe seizures are common. They occurred in about 20 per cent of a series of 11,612 patients with a diagnosis of convulsive disorder reported by Gibbs.[7] Other authors give slightly higher or lower figures. They are somewhat less common in children and probably are seen in about 10 per cent of all children with convulsive disorders.

In this report seven illustrative cases from a much larger group of patients which we have examined are presented.

Alterations of consciousness are an almost constant feature of these seizures and were present to varying degrees in all of our patients. These may range from a slight alteration of awareness of self or environment to a gross loss of contact with the environment and even to levels of loss of consciousness. Between these extremes the usual alteration of consciousness consists of an obvious confusional state in which the patient will not respond to visual, auditory or tactile stimulation. Prolonged periods of automatisms of varying degrees as the result of "petit mal status" or repetitive temporal lobe discharges have been reported by Schwab,[8] Vizioli[9] and Goldensohn and Gold.[10]

The mechanisms by which such alterations of consciousness are produced are not completely clear. Observations on patients and experimental work on animals have demonstrated that small discrete lesions of the brain produced alterations in levels of consciousness only when placed in the reticular formation of the midbrain, the hypothalamus or the medial portion of the thalamus. In conscious patients at craniotomy, stimulation in the region of the amygdala most consistently produces disturbances of consciousness. Since the amygdala is known to have connections with all of these described areas, it seems likely that stimulation here disrupted the normal functioning of the reticular activating system.

Automatisms were present in five out of seven of our patients. These consisted primarily of stereotyped movements such as chewing, smacking lips, clenching fists, fumbling clothing and rubbing the chest or abdomen. They can also consist of more integrated activity which is still rather stereotyped, such as walking about, picking up and handling of objects or removing clothing. Less commonly, the patient may exhibit a high degree of integrated automatic behavior such as that reported by Jackson[11] in the case of a physician who during an attack examined a patient, and making a correct diagnosis, prescribed the proper treatment and suffered a total amnesia for the entire episode.

Licking-chewing and swallowing movements have been evoked by stimulation of the amygdala in both the experimental animal and in the conscious human patient at craniotomy. Such lip-smacking movements were observed in one of our patients in which a neoplasm involved the base and medial portions of the temporal lobe. Movements of the homolateral and contralateral sides of the body have been evoked by stimulation of the lateral surface of the temporal lobe, insula and hippocampus in the experimental animal. The mechanism of the more integrated forms of motor behavior is unknown.

Olfactory hallucinations were noted in one of our patients who reported smelling the odor of "glue." Similar hallucinations have been reported by other patients with temporal lobe lesions. The odor is usually unpleasant such as "something burning," a "chicken coop" or an odor of "smoke." Rarely the odor is pleasant such as "flowers in the room." Such sensations have consistently been associated with structural lesions involving the uncus, as in our patient who had a meningioma of the middle cranial fossa. Stimulation of the uncus in conscious patients at craniotomy has produced similar sensations.

Visual hallucinations were present in one of our patients in the form of seeing people in the room. Such hallucinations associated with temporal lobe lesions are unlike those described by patients with occipital lobe lesions. They are highly organized and are usually of some animate object. Similar hallucinations have been elicited in the conscious patient at craniotomy by stimulation of the posterior and inferior aspects of the lateral surface of the temoral lobe.

Auditory and visual illusions, that is, distorted perceptions rather than false perceptions, are also reported in some patients with temporal lobe seizures. They were not noted in our patients. Such illusions are usually associated with lesions on the lateral aspect of the temporal lobe.

Illusions of memory were reported by two of our patients, in the form of "deja-vu" like experiences. Such memory illusions have been reported by conscious patients when the lateral surface of the temporal lobe on either side was stimulated at craniotomy. They were most frequently obtained from the nondominant cerebral hemisphere.

Emotional experiences in the form of spontaneous intense feelings of fear were reported by two of our patients. Fear is the most commonly reported emotional experience in patients with temporal lobe convulsive disorder although feelings of depression and pleasure may also occur. Penfield was able to elicit experiences of fear by stimulation of the anterior and inferior aspects of the temporal lobe in the conscious patient at craniotomy. Williams[12] correlated the experience of fear with EEG foci in the anterior aspect of the temporal lobe, whereas feelings of pleasure or depression correlated with mid-temporal and posterior temporal foci.

Aphasia was noted in one of our patients and has been reported by others with temporal lobe seizures. Such symptomatology bears a well-known consistent relationship to lesions involving the posterior portion of the superior temporal gyrus in the dominant cerebral hemisphere.

CASE REPORTS

Case 1. W. W. was an 8 year old boy who for the six months prior to being seen had suffered from recurring episodes of "doing things" without any realization of what was going on. Twice the attacks occurred upon arising and he required help in dressing. At school he was noted to be confused and did not know his classroom. The first three attacks lasted all day. The fourth lasted for three hours. During the episodes he responded to questions but spoke in a disconnected manner and appeared to be in a daze. Sometime prior to the disturbances he would complain of a stomach ache. The child was ordinarily considered to be bright, well behaved, agreeable with other children and a good pupil. He had a normal birth and development and had not been ill in any way prior to this difficulty. His neurologic examination was negative. An electroencephalogram (fig. 1A) obtained during the period of abnormality showed a generalized slow dysrhythmia intermittently interrupted by multilobar high voltage, spike and wave complexes. No normal cerebral activity was noted during the entire tracing. The patient was treated with anticonvulsants and had no further attacks of any kind. He was considered to be normal in every way. A repeat electroencephalogram (fig. 1B) taken after three years of freedom from such episodes showed it to be within normal limits.

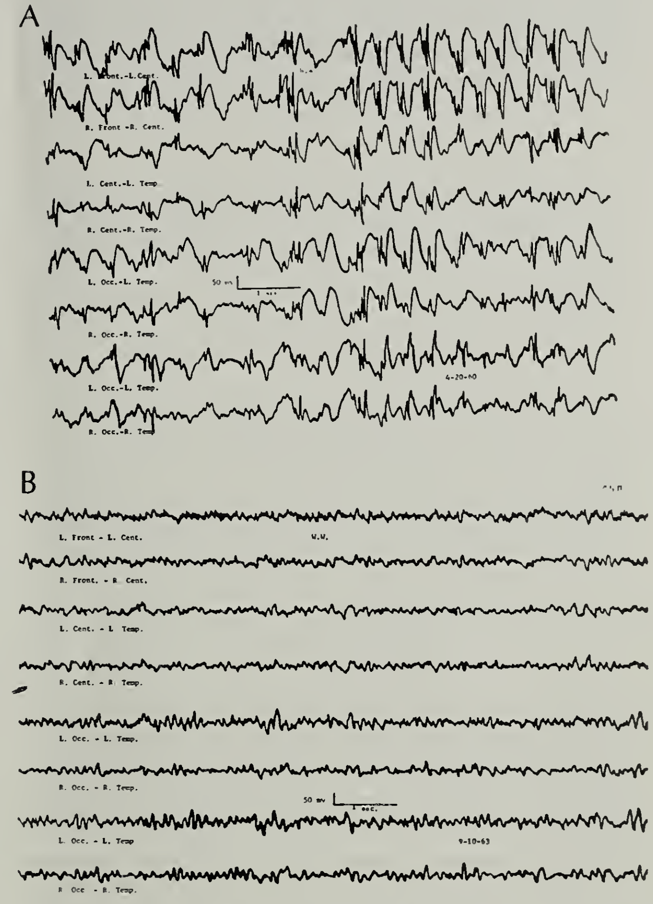

Fig. 1. A. The record shows a generalized slow dysrhythmia with frequent synchronous multilobar spike and wave complexes. B. the record is within normal limits.

Case 2. T. M. was a 46 year old female who was admitted to the medical service of St. Louis University Hospital for evaluation of a gastrointestinal problem. While in the hospital, she became agitated, irritable and paranoid in her feelings toward the hospital staff to such a degree that her behavior required transfer to the psychiatric division. Her neurologic examination revealed her to have a mild nonspecific dysarthria, nystagmus on lateral gaze to either side and an ataxic gait. Within a few days she had a remarkable spontaneous remission of her neurologic and psychiatric symptoms and was discharged from the hospital. During the ensuing year she was admitted to the hospital eight times with these identical symptoms. Further questioning elicited a history of unexplained "blackout spells" which had occurred during the preceding three years. The spells were described as lasting a matter of minutes and being associated with some ill-defined disturbance of her thought processes. The spells had occurred several times per year and were not associated with any type of convulsive movements. On several of these hospital admissions the patient was not rousable for hours and was suspected of having taken excessive doses of medication, though she vehemently denied this. During one of these comatose episodes an electroencephalogram (fig. 2A) was obtained and showed a generalized slow dysrhythmia with frequent multilobar high voltage synchronous sharp wave bursts. The patient again showed rapid clearing of her sensorium and an electroencephalogram (fig. 2B) obtained two days after the one mentioned was essentially within normal limits. These episodes and the associated EEG abnormality with subsequent mental clearing and reversion to a normal EEG were repeated on several subsequent admissions. Such episodes always began with nausea and vomiting and sometimes lasted for as long as 10 days. Skull x-rays, pneumoencephalogram and spinal fluid examination revealed no abnormalities. Anticonvulsant drugs decreased the frequency and severity of these episodes.

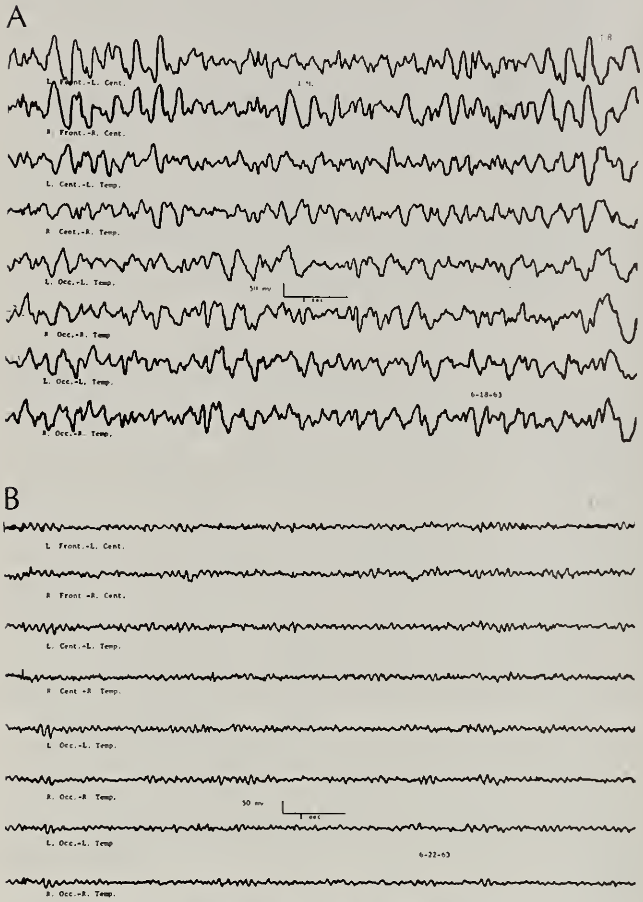
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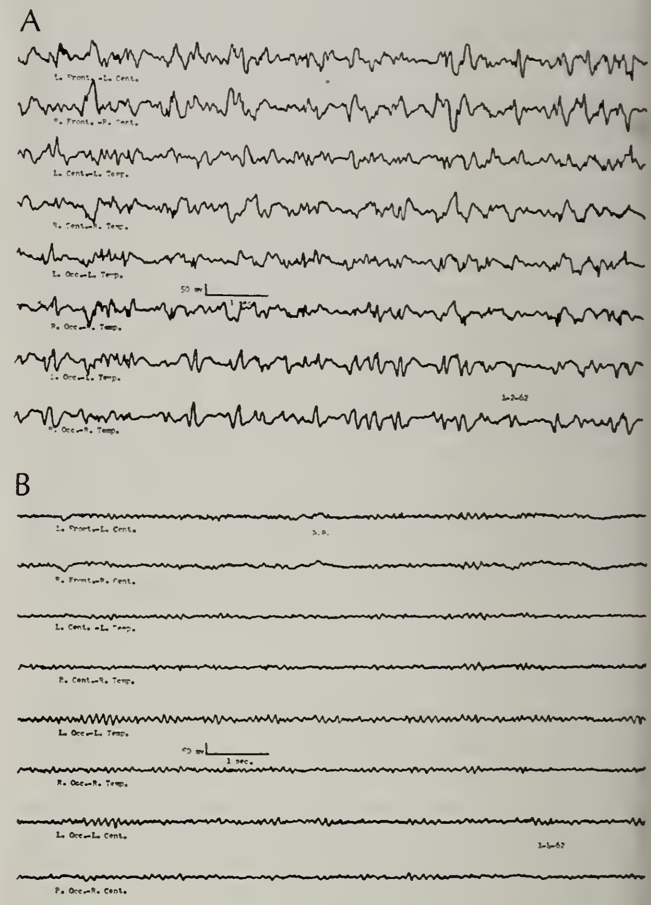
Fig. 2. A. The record shows a generalized slow dysrhythmia with frequent synchronous multilobar slow wave bursts. B. The record is within normal limits.

Case 3. N. B. is a 40 year old white male who gave a history of having had one grand mal seizure without aura approximately every three or four years since childhood. The patient was well-controlled on anticonvulsant drugs. On January 2, 1963, he was admitted to the St. Louis University Hospital for evaluation of a sudden confusional state. His wife reported that similar episodes had occurred on January 1 of 1961 and January 1 of 1962. The prior two attacks had lasted for 24 hours. On examination the patient initially appeared to be alert and answered questions well, provided no factual data were involved. He conversed with the ward personnel in such a way that they did not realize that he was in any way abnormal. He was calm and cooperative and greeted his physician by name though he had not seen him in three years. On further questioning, however, the patient was noted to have evidence of gross mental confusion. He was totally disoriented as to time and place, could not give his correct age, could not tell his daughter's last name, although it was his own, could not solve simple arithmetic problems, was defective in the interpretation of proverbs and could not abstract on the "similarities and differences" tests. He was totally confused regarding recent events. An electroencephalogram (fig. 3A) was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R. Front.-R. Cent.
L. Cent.-L. Temp.
R. Cent.-R. Temp.
L. Occ.-L. Temp.
50 mv
1 sec.
R. Occ.-R. Temp.
L. Occ.-L. Cent.
1-4-63
R. Occ.-R. Cent.

Fig. 3. A. The records show a generalized slow dysrhythmia with frequent synchronous multilobar sharp theta-delta bursts. B. The record is within normal limits.

obtained during the confused state and showed a generalized slow dysrhythmia with much paroxysmal multilobar high voltage, sharp, slow wave activity, and frequent multilobar spike and atypical spike-wave bursts. By the following day the patient had cleared completely and the repeat electroencephalogram (fig. 3B) was normal.

Case 4. D. P. was a 75 year old male who, in the summer of 1962, began to have episodes consisting of an alteration in his state of consciousness associated with a lack of ability to understand what was said to him and a transient inability to speak. When he could talk, he spoke in a confused manner. On examination by two neurologic consultants he was noted to have numerous episodes of one to three minutes' duration which were interpreted by the examiners as bouts of aphasia. These were sometimes of sensory variety, at other times of motor variety and sometimes global in nature. He was also noted to have a mild right facial and right brachial weakness with increased deep tendon reflexes in the right upper extremity, loss of position and vibration sense in both lower extremities and absent ankle jerks bilaterally. An electroencephalogram (fig. 4) done during these episodic disturbances showed a continuous theta-delta rhythm over the left cerebral hemisphere which was maximal in the left temporal-occipital region. The patient continued to have such episodes over the subsequent nine months. He was readmitted to the hospital in a stuporous state. A short time after admission he developed bilateral basilar pneumonia. A shock-like picture supervened and he expired. Postmortem examination of the brain was normal except for a marked atrophy of the left hippocampus which was about one half the size of the right hippocampus. Microscopic examination revealed an almost complete loss of neurones in the pyramidal cell layer of the hippocampus with an increased number of astrocytes in this area.

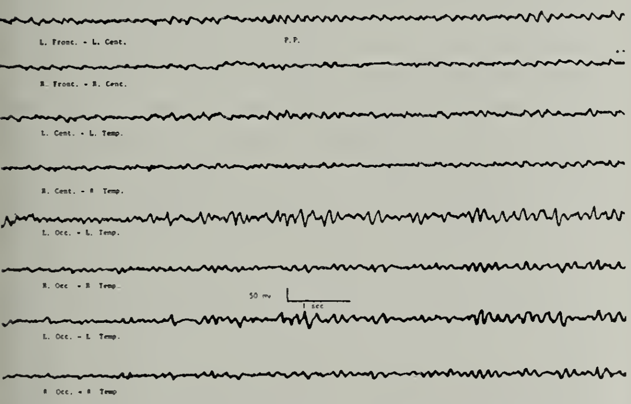

Fig. 4. The record shows a strong theta gradiant in the left temporal-occipital region.

Case 5. M. J. is a 58 year old female who had been well until three years prior to hospitalization when she had a "stroke" with a left hemiparesis from which she recovered in about two weeks. She had also had a history of having had an infantile monoparesis of the right leg the nature of which was indeterminate. Two weeks prior to her being seen, she began to have "spells" during which she would lose track of what she was doing, become nauseated and be seized by a sudden feeling of fear and dread. She would then experience strange forced thoughts consisting of recurring ideas, words and phrases, which crowded out her "normal" thoughts. The attacks lasted from minutes to an entire day. The episodes were preceded by a tingling sensation in the left hand and face. An electroencephalogram (fig. 5) showed a generalized slow dysrhythmia with many positive, negative and diphasic sharp waves and with an abortive spike wave activity with a strong emphasis of the abnormality in the right temporal region. The patient was treated with dilantin and phenobarbital and subsequently noted a decrease in the frequency of her seizures which were no longer present six months after the beginning of treatment. In the subsequent five years the patient has experienced repeated periods of her aura of fear and anxiety but the remainder of the seizure has failed to appear.

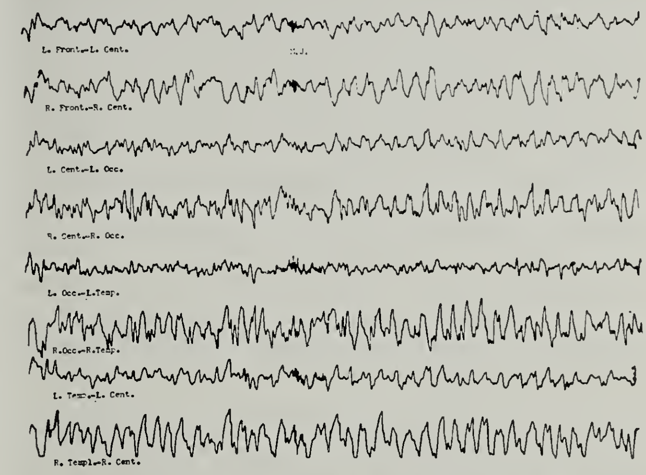

Fig. 5. The record shows a generalized high voltage sharp pattern with a strong right-sided emphasis which is maximal in the temporal and occipital areas.

Case 6. C. M. was a 43 year old white female who had been mildly retarded since birth. At the age of 30 she began to have episodic unconsciousness during which she would fall but would exhibit no tonic or clonic movements. These periods of unconsciousness lasted about three to five minutes and were not associated with tongue-biting or incontinence. During these periods she was noted by observers to smack her lips and to fumble with her clothing. The patient herself stated that just prior to the initial phase of her seizure she would experience visual hallucinations in which she would see groups of relatives or groups of strangers moving about the room. She also stated that she had sudden intense feelings of fear which would last about one minute and which were unrelated to the seizures or to any other environmental stimulus. Her neurologic examination was normal except for the presence of a mild gait disturbance and bilateral limb ataxia which was felt to be a drug effect. An electroencephalogram (fig. 6) was made and showed frequent moderate to high voltage monorhythmic delta activity in the left anterior temporal regions which was sometimes projected to the corresponding areas on the right side. Lumbar puncture and air contrast studies were normal. Patient was treated with anticonvulsants but has proved difficult to control.

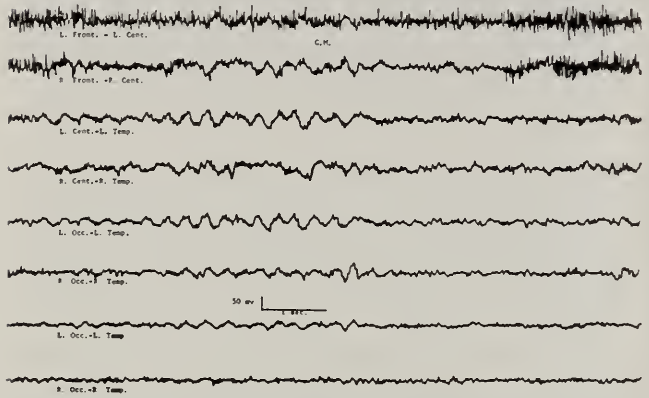

Fig. 6. The record shows bi-temporal theta-delta rhythms which are more prominent on the left side.

Case 7. D. W. was a 52 year old white female who was well until six weeks prior to admission when she began to note occasional right-sided headaches. At about this time, while waiting for a bus, she suddenly experienced a series of events which began with an awareness of a strong odor of "glue." This was immediately followed by a peculiar sensation of unreality. She was noted to make smacking movements of her lips and she dropped a package she had been holding. The entire episode lasted about one minute. She had two subsequent identical episodes which were not preceded by any olfactory hallucination during the next five weeks. She also experienced an increase in the severity and frequency of her right-sided headaches. Her neurologic examination revealed nothing pertinent to her present illness. An electroencephalogram showed a right front-temporal theta-delta focus. Lumbar puncture revealed an opening pressure of 270 mm. of water with a protein content of 18 mgs. per cent. A right carotid arteriogram was done and showed elevation of the right middle cerebral artery without any significant shift of the anterior cerebral artery. Craniotomy revealed a "fist sized" meningioma arising from the floor of the middle cranial fossa which was extracted in toto. The patient made an uneventful recovery from the operative procedure and was discharged.

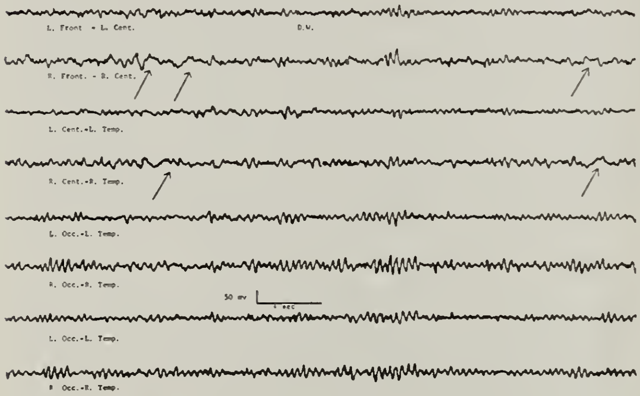

Fig. 7. The record shows intermittent theta-delta activity in the right temporal and frontal regions.

In several large series of patients with temporal lobe seizures, about half of the patients were noted to have some significant interictal psychiatric abnormality which ranged from overt psychotic reactions to psychoneuroses and personality disorders.

What Bradley has called secondary behavior disorders in epileptics represent the patients' attempts to adapt themselves to their illness. When there is sufficient brain damage, one sees symptoms commonly referred to as characteristic of "the epileptic personality": restlessness and overactivity, surliness, irritability, rapid mood changes, hypochondriasis, narrowed fields of interest, perseverative thinking and behavior, obsessive-compulsive traits, ritualisms, egocentricity and paranoid reactions. Thinking in these patients has been described as "slow and sticky," imagination is impoverished, adaptability poor. There is impairment of their ability to abstract. These symptoms may be found in patients with brain damage, regardless of cause, and are not necessarily related to epilepsy per se. Since they are apt to be seen in epileptic colonies and in severely affected epileptics, their identification with the disease epilepsy is not surprising. However, many epileptic persons are free from such symptoms and possess normal or superior intelligence and ability. There may be no evidence of "organicity" in their personality or behavior. Even in these patients, however, there are personality disturbances occurring with sufficient frequency to merit further inquiry. We have examined a group of patients to evaluate these symptoms.

Ten young adults and 16 preadolescent epileptic children were included in this study.[13, 14] Factors of drug overdosage and of organic brain symptoms were taken into consideration in analyzing the data. Careful neurologic, psychiatric and social service evaluations were made. Electroencephalograms in each instance demonstrated paroxysmal disorder. Analyses of the data in these patients failed to demonstrate the existence of a basic type of personality structure which could be regarded as peculiarly epileptic. From psychologic studies alone, without supporting history or EEG data, none of these patients could be identified as epileptic. Some showed mild degrees of "organicity"; the range of intellectual levels varied widely and there were wide ranges of responses to external stimuli. It was observed, in the study of the young adults, that some features were common to them all. There was a uniform rebellion against the illness of convulsive disorder, which represented a serious stress to them. Their response to this stress called for a variety of defense mechanisms, ranging from fear to denial. In general they required strenuous efforts for successful adjustment, intensifying the more normal mechanisms of withdrawal and rationalization and the more primitive ones of regression or fixation. There were feelings of being different, defective and rejected, with resultant anxiety, isolation, passivity and introjection. They became hostile to their environment.

The younger children demonstrated environmental responses consistent with the development of character of the older patients. These children are faced with a need to control their handicap and the psychologic challenges arising from it. The immediate environment, family and playmates, react to the behavior and personality of these children, further pressuring them. Four categories of pressures and anxieties seemed to be present: (1) parental responsibility for the care of the patient; (2) the spectacular manifestations of the illness, its possible hereditary stigma, and age-old prejudices about epilepsy; (3) reactions to the child's frequently difficult and aggressive personality; (4) stresses at school and later at work, where limitations in activities and learning presented difficulties.

In considering the reactions of parents, overt and covert rebellion against the "burden" was frequently observed. Social and financial stress in dealing with the illness appeared. The sick, abnormal and "different" child produced uncomfortable feelings in the parent. Treatment and tests were anxiety provoking, producing challenges to parent and child alike. Months and years of medication called for explanations to teachers, friends, camp fellows and relatives.

Seizures are fearsome, and present threats to neighbors who kept their children away, thereby intensifying the child's feelings of being different. Guilt and disgrace feelings in the parent lead to overprotection or overt rejection. The child was treated as an invalid; punishment was withheld for fear of precipitating seizures, producing in the child insecurity and depression, or overt acts of aggression. Parents themselves blamed each other for their "catastrophe"; desertion by one or the other parent might occur, or recriminations might be raised about poor heredity, mistreatment during pregnancy or the punishment for not wanting the child. Such parental conflict was additional stress to the already heightened emotional lability in the child.

As has already been mentioned, in common with other brain damaged individuals, epileptic children frequently show low frustration levels, short attention spans, little emotional control, restlessness and irritability. They may be agressive with toys, playmates and siblings and are marked by people around them as having abnormal personalities. School authorities, neighbors and even police become concerned, intensifying the feelings of these children. This interest frequently becomes a source of pressure on the parent to seek professional assistance. As a result these children may be seen for the first time in a neurology clinic, by a social agency or in a child guidance center. Many of our referrals were made directly by interested agencies.

An additional problem has to do with schooling, where reading difficulties, speech defects, varying degrees of aphasia, difficulties with abstract subjects such as arithmetic present themselves. These disorders represent organic brain dysfunction, not mental deficiency, and must be treated as such. Unless the schools were prepared to provide special facilities, such children, not eligible for classes for retarded children, have been pushed along from class to class, without ever having learned the fundamentals of the "3 Rs." Such educational defects have compounded the difficulties of being epileptic.

For the young adult epileptic, job adjustment may be difficult. Unless his full potential for work has been developed, opportunities for employment become limited by his lack of skills. Dangers inherent in certain work further limit his employability; even when the epileptic person can safely do a job, certain prejudices and anxieties about workmen's compensation insurance requirements serve as bars against employment. Social restrictions, limitations against automobile driving and legal obstacles contribute to his feelings of separateness and anger.

In our opinion, psychotherapy in its broadest sense is a valuable and necessary adjunct in the treatment of the epileptic person. The level of treatment may be the kind provided by a social caseworker, the psychiatric team of a child guidance clinic or of the psychiatrist. We have observed the beneficial effects of counselling of parents, of finding an adequate foster parent, of play therapy for children. In older patients, vocational guidance and job training have been invaluable. In selective cases intensive psychotherapy has been helpful. We have observed that attention to the mental health of patients has been successful in reducing the frequency of seizures, even though anticonvulsant drug dosage is not altered. The role of afferent impulses, whether somatic, visceral or psychic, in precipitating seizures has been repeatedly demonstrated. In common with Symond's[15] observations, patients have told us of their ability to inhibit the progression of an epileptic seizure by what may be considered to be ritualistic acts or thoughts. In essence these might be considered to represent afferent stimuli which have inhibitory effects. It seems that a mental hygiene program for epileptic patients has a beneficial effect in lessening convulsion producing stimuli; possibly also, the patient in psychotherapy learns to use adequately some of his defense mechanism in inhibiting attacks. How, is of course, unknown.

The following case is illustrative.

Case 8. S. H. is 9 years old and the second youngest child of a family of five children. He has been diagnosed at Cardinal Glennon Hospital as suffering from chronic brain syndrome with convulsive disorder. He also had a marked speech impediment. His brother and sisters were healthy. The convulsive attacks were under fairly good control with anticonvulsive medication until the onset of his mother's mental illness. His home situation had been poor but now became intolerable for him.

The father has been out of the home since 1957 when he was sentenced to the State Penitentiary for seven years on a charge of rape of his, then 14 year old, step-daughter. The mother cared for the children with the financial help of Aid to Dependent Children. After the onset of her mental illness and eventual hospitalization, the maternal grandmother assumed responsibility for the patient and his siblings. The maternal grandmother always disliked the patient. She blamed the patient's seizures for the mother's mental illness. She was suspicious of him; called him all kinds of names, refused to let him play with other children, locked him in his room and could not be bothered with administering his anticonvulsive medication. Finally, under these tremendous emotional strains and without the benefits of medication, he began to convulse frequently and speaks more poorly. The maternal grandmother brought him to the hospital because of the frequency of seizures and refused to take him back. She was openly hostile toward and rejecting of this boy.

The child had a warm, likeable personality and had great need for affection and understanding, and loving attention. He attached himself easily to anyone who showed him friendship. His speech impediment improved tremendously with speech therapy. There had never been a school problem.

With the help of a child placing agency, a foster home was found, with parents who were able to give him not only good physical care but also to meet his emotional hunger for love. His epileptic seizures came well under control. His speech impediment cleared up without further speech therapy. He has been happy in his foster home and at school during the last three years.

Summary and Conclusions

Primary psychiatric symptoms in epileptic persons represent ictal phenomena. Recognition of this feature of convulsive disorder, correlated with identifying features in the electroencephalogram, permits the institution of appropriate chemotherapeutic measures.

Secondary psychiatric behavior disorders in epileptic persons can occur interictally. They are distinguished from behavior characteristic of organic brain syndromes, which are not specific for epileptics. Rather, they refer to the responses of the patient to being an epileptic and his frequently inadequate struggle with an environment hostile to his illness. For such patients, the institution of psychiatrically oriented treatment programs has proven to be exceedingly beneficial.

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Fat Embolization: A Postoperative Complication

A report of a case of fatal fat embolization following surgery is presented.

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Dr. Baumann is an intern at St. Luke's Hospital and Dr. Walsh is pathologist at St. Luke's Hospital.

Although Warthin in 1913[1] expressed the opinion that fat embolization was the commonest cause of death following fractures, there remains considerable difference of opinion as to the mode of formation, frequency and significance of fat emboli.

In recent years Peltier[2, 3, 4] has written extensively in support of the "mechanical" origin of fat emboli. In his opinion, trauma to bone causes fat and often clumps of marrow cells to enter the venous system. Rappaport[5] reviewed 200 fatal fracture cases and found bone marrow emboli in 6 per cent. Bergentz[6] and others[7, 8] have written in detail regarding the intravascular origin of fat emboli due to metabolic changes induced by trauma or disease states. In such instances bone marrow emboli are not seen.

The other major area of confusion results from failure to distinguish between symptomatic and asymptomatic fat embolization, the former being much less common.[9-12]

The case to be presented is an example of the mechanical type of fat embolization. It was symptomatic and constituted the major cause of death.

Case Report

M. A., a 26 year-old white female, was admitted to St. Luke's Hospital with the chief complaint of inability to walk due to flexion deformities of the knees.

At age 18, the patient first experienced pain in the hips, knees, ankles and feet. At age 19, a diagnosis of rheumatoid arthritis was made and prednisone therapy was instituted. During the ensuing years, treatment with prednisone, gold, phenylbutazone and antimalarial compounds failed to produce significant regression of the rheumatoid process. By age 20, bilateral flexion contractures of the knees had impaired the patient's ability to walk, although hips, ankles and toes retained near normal range of motion. By age 26, ambulation was virtually impossible. Five months before admission a normal infant was delivered by caesarean section.

When the patient was admitted to the hospital, the facies was mildly cushingoid and the trunk was moderately obese with relatively slender extremities. The blood pressure was 120/80 mm. Hg., temperature 37 C., pulse rate 90 per minute and regular, and respirations were 24 per minute. The chest was clear. The heart was not enlarged and there were no murmurs. The spleen was easily palpable. The extremities showed obvious rheumatoid arthritic changes involving the hands, wrists and shoulders and severe changes involving both knees. The knees could not be extended beyond 90 degrees. The feet and ankles showed minimal arthritic involvement. Neurologic examination was not notable.

The hemogram and urinalysis were normal. The VDRL was nonreactive. The latex flocculation test was reactive. The uncorrected erythrocyte sedimentation rate was 35 mm./hr. The total serum protein was 6.8 gm. per cent with 4.0 gm. per cent of albumin and 2.8 gm. per cent of globulin. The serum uric acid was 6.8 mg. per cent. Two examinations failed to reveal L.E. cells. The chest roentgenogram was not remarkable. Roentgenograms of the knees showed extreme demineralization of bone with roughening and erosion of the articular cortex of both the femur and tibia with narrowing of the joint space.

After 10 days of medical and physical therapy had failed to produce adequate extension of the knees, bilateral knee arthrodesis, with 1.2 by 52 cm. Küntscher intramedullary nails, was performed. Hydrocortisone, 50 mg. intramuscularly, was administered before surgery and every eight hours postoperatively, along with supplemental dexamethasone during the operation. Methohexital sodium, nitrous oxide and levorphanol tartrate anesthesia were employed. The surgery was uncomplicated, the vital signs remaining stable throughout. During the operation and recovery room care, 1500 cc. of whole blood and 1500 cc. of 5 per cent dextrose in water were administered intravenously. After one hour and 40 minutes in the recovery room, the patient was alert and had normal vital signs.

Three hours postoperatively, drowsiness was observed. The pulse rate was 140 beats per minute and the blood pressure was 114/80 mm. Hg. A striking feature was chalk-white pallor in association with cool, dry skin. The patient's only complaint was nausea. Four hours postoperatively the patient's condition was unchanged. The fourth unit of whole blood and another liter of 5 per cent dextrose in water were started. Seven hours postoperatively the patient was semicomatose with a pulse rate of 160 per minute, blood pressure of 130/70 mm. Hg., and a respiratory rate of 44 shallow breaths per minute. The lungs were clear to auscultation and the pupils were pinpoint. Both arms were moved on command and an extensor plantar response was elicited on the right. With the patient in a supine position, the external jugular veins were distended and the liver edge was palpable 2 cm. below the right costal margin. The pulmonic second sound was accentuated. The electrocardiogram showed sinus tachycardia and changes compatible with acute cor pulmonale. Methoxamine Hydrochloride, 10 mg., and lanatoside-C, 1.2 mg., were given intravenously and nasal oxygen was begun. Four hundred cc. of normal appearing urine was obtained by catheter. At this time the hemoglobin was 14.3 gm. per cent. There was a slight clearing of the sensorium and the patient complained weakly of nausea. Vomiting, restlessness and moaning were noted. Heparin, 75 mg. was administered intravenously. The temperature rose to 40.2 C. and respirations increased to 60 per minute. The pulse rate remained 140 to 160 per minute and the blood pressure was steady at 110/70 mm. Hg. An additional 75 mg. of intravenous heparin was administered. The urine collected was adequate in amount with a specific gravity of 1.012.

The situation remained unchanged until 14 hours postoperatively when brief periods of apnea were observed. The patient remained extremely restless. The chalk-white skin was cold and moist. Secretions began to accumulate in the bronchi and trachea despite frequent endotracheal suction. Sixteen hours postoperatively, the blood pressure was 114/70 mm. Hg. The pulse rate was 130 per minute, and respirations were 24 per minute with lengthening periods of apnea. The hemoglobin was 15.4 gm. per cent. The white blood cell count was 16,200/mm.3., and the Lee-White clotting time was nine minutes. The blood urea nitrogen was 21 mg. per cent., serum electrolytes were: sodium 131 mEq. per liter, potassium 3.9 mEq. per liter and chloride 95 mEq. per liter. Fat was not demonstrated in the urine; however the technic employed in the laboratory was open to question.

Cyanosis and Cheyne-Stokes breathing had developed and tracheotomy was performed. The blood pressure fell precipitously, respirations ceased; then the heart beat failed. External cardiac massage was to no avail and during the 21st hour after surgery the patient expired.

At autopsy the body was as described with operative wounds of recent origin. From 200 to 300 cc. of fluid were present in each pleural cavity. The lungs weighed 610 and 720 grams and collapsed incompletely. The cut surfaces of all lobes were pink in color, meaty in consistency and markedly firm with diffuse areas of atelectasis. There was a moderate degree of pulmonary edema with frothy yellow fluid oozing when slight pressure was applied. The heart showed acute dilatation especially of the right auricle and ventricle. The liver was enlarged, weighing 2,070 grams. The kidneys appeared normal except for some congestion. The brain was edematous with flat gyri and shallow sulci and weighed 1,380 grams. A definite pressure collar was noted in the area of the foramen magnum. There was no gross evidence of fat in any of the organs examined.

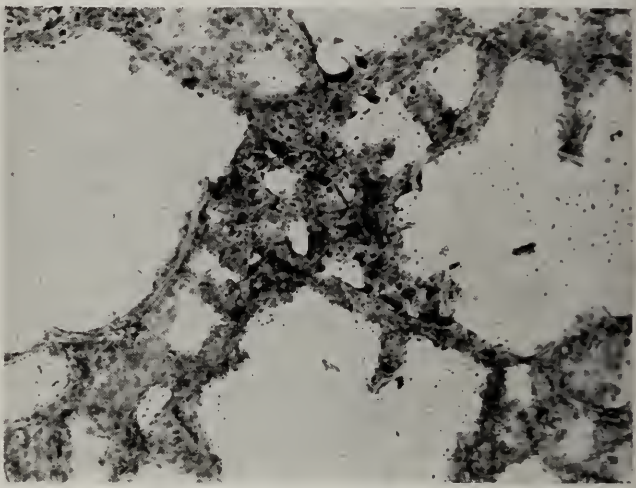

Fig. 1. Section of lung showing fat globules in small vessels of alveolar septa and thickening of alveolar walls. Sudan III stain, × 140.

Microscopic sections of the lungs revealed fat globules in most small blood vessels including those of the alveolar walls (fig. 1). Bone marrow emboli were noted in some pulmonary arteries (fig. 2). Sections of kidney revealed many fat droplets in glomerular vessels and to a lesser extent in other small arteries. Brain sections showed numerous blood vessels filled with fat, which, in many instances, seemed to diffuse into perivascular areas (fig. 3). Some perivascular hemorrhages were present.

Résumé of Case Report

This patient died 21 hours after surgery, the course, signs, symptoms and pathologic data all being characteristic of an extreme degree of fat embolization. There was a sudden onset of cardiopulmonary insufficiency three hours after surgery, associated with signs of right heart strain

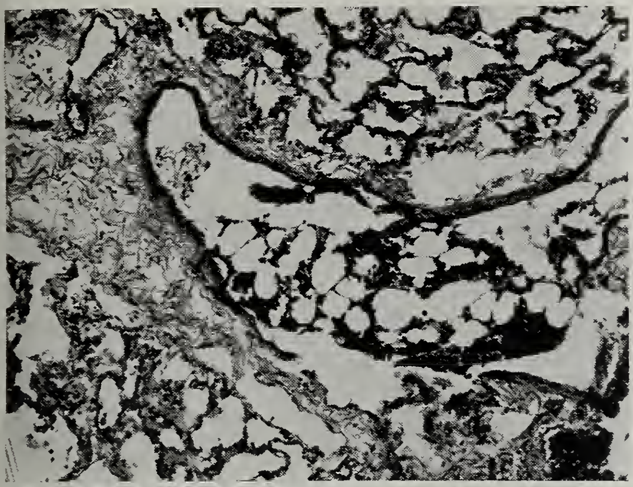

Fig. 2. Section of lung showing bone marrow embolus in small pulmonary artery. Hematoxylin and Eosin stain, ×95.

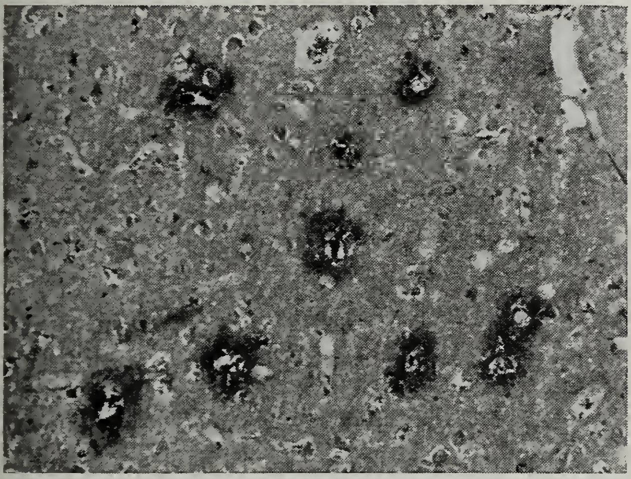

Fig. 3. Section of brain showing fat in small arteries with perivascular hemorrhage and extravasation of fat. Sudan III stain, ×140.

and cerebral involvement. Findings at postmortem revealed fat embolization sufficient to impair pulmonary and cerebral blood flow.

DISCUSSION

In review of records at St. Luke's and Barnes Hospitals in St. Louis, it was of interest that not a single clinical diagnosis of fat embolization had been made in the last 10 years. During this period more than 19,000 orthopedic patients had been admitted to these hospitals. Autopsy records in the two institutions revealed only four instances of fat embolization in addition to the case reported here. Two of these were associated with fractures of long bones and two followed nailing of hip fractures.

The bulk of the information on this subject is in literature on surgery and pathology. It seems appropriate to emphasize the clinical manifestations for the internist since this clinical picture may commonly prompt medical consultation.

Patients most likely to develop signs and symptoms of fat emboli are those who have suffered trauma, especially fractures or surgical procedures on long bones. Delayed splinting and shock seem to increase the incidence of this syndrome.[4] However, there is frequently a lack of correlation between the degree of trauma and the severity of the clinical manifestations of fat embolism.

Characteristically, there is a latent period between the trauma and onset of symptoms. This may vary from several hours to eight or 10 days, but most often is from 48 to 72 hours.

Onset of clinical symptoms is heralded by tachypnea, tachycardia, pallor, fever and signs of acute right heart strain. Neurologic manifestations may occur simultaneously or soon thereafter. These suggest diffuse brain involvement with apathy, stupor or coma, along with pyramidal and extra pyramidal tract signs.[10, 13-17] Later, petechial hemorrhages are common, especially about the head and neck. Funduscopic changes are rare but are quite characteristic when seen. Fat will not be apparent in the vessels, but a cherry red spot at or near the macula with surrounding retinal edema, hemorrhages and white exudates may be seen in the rare case.[18, 19] The combination of cardiopulmonary and neurologic signs is characteristic of the clinical syndrome of fat embolization.

Terminal manifestations include pulmonary edema and shock, the signs of which are strikingly absent earlier.[4, 16]

Laboratory aids in the diagnosis of fat embolization are helpful but nonspecific. Chest roentgenograms reveal somewhat floccular opacities bilaterally in perihilar and basilar distrubution not unlike those seen in pulmonary edema.[20-22] Demonstration of fat in the sputum is nondiagnostic in that 80 per cent of specimens from control subjects contain some fat.[23, 24] Fat is present in the urine of 12 per cent of healthy subjects and in 52 per cent of traumatized patients.[23, 25] Lipuria is commonly seen in traumatized patients who show no clinical evidence of fat embolization.[23, 25, 26] Serum lipase elevation[9, 27] is reported to occur early and the serum lipase determination may prove to be a worthwhile confirmatory test. Serum lipid levels show no direct relation to the severity of symptoms.[7, 22] Several observers have demonstrated larger than normal globules of fat in the blood stream (7 to 15 micra) following trauma.[6, 9] Electrocardiographic signs of acute right heart strain lend supporting evidence.

The laboratory data may be nonspecific; however, such data when combined with history, symptomatology and physical findings should afford a secure diagnostic position.

In the large majority of instances, fat embolization is probably asymptomatic and of no clinical importance. When the clinical picture develops with its characteristic cardiopulmonary and neurologic findings, the mortality varies widely from 5 to 75 per cent in various groups reported.[11, 15, 23, 28, 29] A short or absent latent period is usually an indication of massive embolization, and the mortality is therefore higher.[30] The prognosis also seems to vary with the depth of coma.[29] Among patients recovered, the only residua described were neurologic.[17]

In the traumatized patient or the patient undergoing surgery on long bones, prompt and adequate splinting and the use of tourniquets respectively are important measures in reducing the amount of fat entering the circulation.[4] In the case reported, the amount of trauma attendant to the introduction of two intramedullary nails may well be considered excessive for one operative procedure. Peltier and Küntscher have advised against the use of intramedullary nails because of the amount of bone marrow which is disrupted with this technic.[2, 9]

The therapy of the clinical syndrome of fat embolization is not well established. Digitalization for right heart strain seems widely accepted. Oxygen therapy is useful as a supportive measure.[31] The use of heparin has been both advocated[32] and condemned.[33] Peltier[34] has some evidence that lipase inhibitors, e.g., ethyl alcohol, may be helpful. Bergentz[6] has advocated low viscosity dextran to improve capillary circulation. Successful use of hypothermia has been reported by Harnett.[35]

Summary

A case is reported of fatal fat embolization occurring in a young woman following the introduction of two Küntscher rods. Bilateral knee arthrodeses were attempted because of severe flexion contractures secondary to rheumatoid arthritis.

The patient developed respiratory embarrassment, right heart strain and stupor three hours after surgery and expired 18 hours later.

The syndrome is discussed in some detail regarding pathogenesis, symptoms, signs, diagnosis and therapy. Sudden onset of pulmonary embarrassment, right heart strain and various neurologic signs should alert the internist to the diagnosis of fat embolization in his consultations on the orthopedic patient.

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The reader is referred to the excellent publication of Simon Sevitt entitled "Fat Embolism" and published by Butterworths of London in 1962.

THOMAS M. MIER, M.D., ***and***
RAYMOND E. PROBST, M.D., ***St. Louis***

The First Minute of Life: A Physiologic Review

Information on the physiologic changes that occur in the fetus at the time of birth, appearing principally in journals of physiology, are reviewed.

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Neonatology, the study of the newborn infant, has assumed ever increasing importance not only as a result of the great strides that have been made in understanding of the physiologic changes that occur in the fetus at the time of birth but, also, because it is hoped that the application of that knowledge may decrease the infant morbidity and mortality in the first month of life. Much of this information has been reported in journals of physiology which are frequently not read by the practicing obstetrician. The present review of the literature was undertaken to acquaint the practicing obstetrician with information which, though well founded from an experimental point of view, has not been fully utilized in clinical practice.

Discussion

It is well known that rhythmic respiratory movements occur in utero and that the neuromuscular mechanisms necessary for their occurrence are present as early as the twentieth week of gestation.[24] The onset of respiration at birth is not merely a continuation of intrauterine respiration. The initial respiratory effort, the primitive gasp, frequently occurs within a few seconds after the delivery of the head and it is an explosive inspiratory effort. Respiration is controlled by a collection of nerve cells in the brain stem known as the respiratory center. These cells are not confined to a circumscribed area or nucleus but are distributed throughout the brain stem.[13] They are located at different levels in the formatio reticularis. The primitive gasp is initiated by the apneustic or inspiratory center located at the level of the striae accousticae. It is the function of the pneumotaxic center situated in the upper part of the pons, through its inhibitory influence, to convert the apneustic movements into normal respiration.

Peripheral chemoreceptors may also play an essential role in the initiation of respiration. At birth anoxia not only fails to stimulate respiration but it may inhibit the onset of respiration by further depressing the respiratory center. Because of this, the active peripheral chemoreceptors may be unable to elicit a response. In the initial respiratory movement of the newborn infant two forces need be overcome. One is the elastic resistance of the lungs; the other is the surface tension of the alveolar and bronchiolar walls.[24] Lungs removed from stillborn fetuses require up to 35 cm. of water pressure for expansion. From surface tension alone the resistance to the first breath is equal to 10 cm. of water. Another factor that may influence expansion of the alveoli is the filling of the pulmonary capillaries with blood.[47] Before the first breath the alveoli are crumpled sacs, and their capillaries contain little blood, but with the opening of the pulmonary circulation the capillaries become filled with blood, and this to a minor degree contributes to their expansion. It can be seen that the primitive gasp is a gigantic effort which overcomes all the resistances in an organ system that is anatomically, but not yet functionally, developed. The function of the primitive gasp is to produce oxygenation of vital tissues, the most important of which is the brain. If it fails to awaken the pneumotaxic portion of the respiratory center, the gasps become farther apart and the medulla dies and this occurs before the heart stops beating. Conversion of the primitive gasp or apneusis to normal rhythmic respiration is brought about by the inhibitory influence of the vagi on the apneustic center as well as the direct inhibitory influence of the pneumotaxic center on the apneustic center. Toward the latter part of the inspiration the alveoli are stretched, thereby resulting in excitation of the afferent fibers of the pulmonary vagi which inhibits the inspiratory activity of the apneustic center resulting in expiration. The pneumotaxic center located in the pons also inhibits the inspiratory center. Expiration is similarly interrupted with the production of another inspiration. This reflex control, referred to as the Herring-Breuer reflex, is normally established within the first minute of life. In normal infants, the onset of respiration occurs spontaneously within the first minute of life. This was demonstrated by Higgins who reported 1,938 deliveries in which the onset of respiration was spontaneous and no resuscitation was required. These were all normal deliveries with no twins, prematures or forceps deliveries.[34] Needless to say all babies are not normal births and spontaneous respiration does not occur within the first minute of life in all instances.

An extraordinary tolerance to anoxia is common to all mammalian fetuses. Newborn puppies can live as long as 23 minutes without oxygen whereas adult dogs expire in three minutes under anoxic conditions. It is impossible at the present time to set a safe limit of time for apnea of the newborn infant. Newborn infants extracted by postmortem section 15 to 20 minutes after the death of their mothers have been revived.[14] With longer periods of apnea at birth, abnormal breathing patterns and the respiratory distress syndrome are more prone to develop after the first few hours of neonatal life.[19]

Apnea of the newborn infant may be of peripheral origin when it arises from difficulties in the respiratory or cardiovascular systems. It is of central origin when it is due to depression of the respiratory center. By far the most common problem arises from the aspiration of debris. However, certain anomalies occur with sufficient frequency that one should be aware of their presence. The diagnosis of congenital diaphragmatic hernia should be considered in every newborn infant with tachypnea and episodes of cyanosis, particularly if it persists after clearing of the airway.[39] X-ray of the chest easily confirms the diagnosis and prompt surgery may be lifesaving. Esophageal atresia is less common but should be suspected if swallowing of saliva is followed by episodes of cyanosis. The presence of hydramnios should alert one to the possibility of such abnormalities. When a cardiac anomaly is present, the increased cyanosis in association with such activity of the baby as crying should arouse suspicion.

The premature infant imposes even more respiratory pitfalls. Respiratory problems of the premature arise from the state of development of the lung at the time of birth. In the development of the lung three stages can be distinguished. For the first four months of fetal life the lung may be referred to as a bronchial lung. The primitive tubes lined by cylindrical epithelium are imbedded in an avascular mesenchyme. This structure is incompatible with life. From four and one-half months of fetal life until term the lung is referred to as a "canalar lung." Primitive air passages lined by cuboidal epithelium bud from the end of the bronchioles. The mesenchyme becomes progressively more vascular until at about term true alveoli of the adult type are present. True alveoli do not develop until term, independent of when the baby is born.[39]

The respiratory center may be depressed by one of three causes: (1) Anaesthetic and analgesic agents administered to the mother during the course of labor[39] is, however, the least permanent when skillful resuscitative measures are used. Without minimizing the importance of preventing narcosis in the newborn infant, Eastman, et al, was unable to show its relationship to the etiology of cerebral palsy.[30] (2) Intrauterine anoxia secondary to such conditions as abruptio placenta and prolapsed cord. (3) Cerebral edema or hemorrhage because of a long or difficult labor. Such operative procedures as version and extraction, or mid forceps, are frequently followed by varying degrees of asphyxia of the newborn infant. It is important to remember that whatever the cause of the apnea, the longer it exists the greater is the depression of the respiratory center and, for that reason, measures should be taken to counteract its presence. The birth canal is a dangerous passage and a certain amount of trauma is unavoidable. In addition to these stated causes of fetal depression in the first minute of life, the baby may be suffering from shock. Shock in the newborn infant is due to three well defined clinical entities.[35] The pale limp baby with respiratory distress may be suffering from intrauterine asphyxia, fetal hemorrhage or severe hemolytic disease. For example, knowledge that one is dealing with a velamentous insertion of the cord may lead to prompt lifesaving transfusion of the baby.

Changes that occur in the vascular system at the time of birth must largely be inferred from animal experimentation. With the first breath, ventilation of the fetal lung is accompanied by a drop in the pulmonary arterial pressure.[4] This is due to the decrease in the peripheral resistance in the pulmonary vascular bed that occurs when the alveoli distend and with this their capillaries become an active circulation. With the decrease in the pressure within the pulmonary artery, which occurs within minutes after birth, the flow of blood through the ductus arteriosus is reversed in direction and flows from the aorta into the pulmonary artery. The foramen ovale, although not anatomically closed until about 12 weeks, is functionally closed as soon as the pressure becomes greater on the left side of the heart than the right.[21] In experimental animals the musculature of the ductus arteriosus contracts actively at the onset of respiration because the chemoreceptors in its wall are stimulated by the increased amount of oxygenated blood flowing through it. Postmortem studies show the same thing happens in the human being.[53] Oxygen saturation curves show that when the blood is well oxygenated functional closure of the ductus arteriosus takes place but when there is respiratory distress the musculature of the ductus arteriosus fails to contract and the right to left shunt which occurs allows the blood to short circuit, the lungs thus producing a vicious cycle.[31] Further evidence of failure of closure of the ductus is the presence of a faint, transient systolic murmur which is best heard in the first 15 minutes of life at the third and fourth intercostal space on the left. This murmur is heard more often in babies delivered under anoxic circumstances than in those delivered under normal conditions. In one study, a murmur could be heard in 71 per cent of babies showing signs of asphyxia as compared with 13 per cent of those showing no signs of asphyxia.[18]

Establishment of an extrauterine circulatory system involves separating the systemic and pulmonary circulation and the obliteration of the placental circulation. The right and left ventricular pressures are the same before breathing begins. In some animal experiments, clamping the cord produced little or no change in the right and left ventricular pressures.[32] There is a controversy as to the time when the cord should be clamped in relation to its hemodynamic and respiratory effects on the fetus. In newborn lambs if the cord is ligated before respiration begins, asphyxia results as well as an increase in blood pressure. This is partly due to the asphyxia and partly because the systemic circulation is cut off from the low peripheral resistance of the placenta. With the ductus arteriosus open this high pressure is communicated to the pulmonary artery.[15] This sudden high head of pressure which is transmitted to the alveolar capillaries has been incriminated by some investigators as a possible cause of the respiratory distress syndrome.[38] The blood volume of a full term infant is about 400 cc., of which 100 cc. is in the placenta. The entire 400 cc. is propelled by the fetal heart. When the cord is clamped immediately after birth about 100 cc. of blood can usually be obtained from the placental end of the cord. This blood will flow into the infant if clamping is delayed until after the placenta is separated.[29] If the infant is deprived of this placental blood there is a significant reduction of the erythrocyte count and hemoglobin as compared to infants in which clamping was delayed. This alteration in the blood picture can be demonstrated in the first week of life. Failure of the infant to receive its placental blood may lead to a deficiency of iron during the first year of life.[52] It is obvious, therefore, that the infant's blood volume is greatly influenced by the amount of blood transferred from the placenta at the time of birth. We might add though, that there are various opinions as to whether the baby actually needs the blood which is in the placenta at birth. At the time of elective cesarean section, a large quantity of blood is trapped in the placenta. Also, if the baby is held above the level of the placenta, such as on the mother's abdomen, for any period of time, it would lose additional quantities of blood to the placenta. A common practice at the time of delivery is stripping of the umbilical cord. This may be hazardous because the blood is forced into the baby under an undetermined and uncontrolled pressure and with undue rapidity resulting in not only cardiac arhythmias but transient increases in cardiac diameter as shown by x-ray. However, subsequent x-rays reveal that the heart size returns to normal within a few days.[17] It is our practice to hold the newborn infant about 15 cm. below the level of the placenta which is in utero, leaving the cord undisturbed until all pulsations have ceased, thus allowing the blood to flow into the baby under the influence of its venous pressure. By this procedure all the blood which is to flow to the fetus does so. During this short time the baby receives its initial evaluation according to the method of Virginia Apgar[3] and steps are taken to alleviate any depression if improvement is not noted by 60 to 90 seconds.[33] It is our belief that as the lungs expand and fill with blood, if the baby did not receive this placental blood, a hypovolemic state might ensue.

It can be repeated that the birth canal is a dangerous passage causing a certain amount of trauma and depression which is unavoidable; however with the knowledge of newborn physiology, both normal and pathologic, early evaluation and treatment may further reduce the declining perinatal mortality and morbidity rate.

Summary and Conclusions

1. A great mass of physiologic information is available to interpret the events of the first minute of life. One must utilize this information in the immediate neonatal care.

2. The proper use of anesthetic and analgesic agents, the avoidance of trauma and the detection of intrauterine anoxia may preserve the integrity of the respiratory center so that the apneustic respirations that occur within 30 seconds of life will be followed by normal pneumotaxis within one minute.

3. It seems hardly necessary to mention that respiratory distress may result from aspiration of debris. Maintain the head lower than the rest of the body until the respiratory passages have been emptied of debris.

4. When to clamp the cord is a more contraversial matter; in the full term infant, when there is no contraindication, the baby should be held about 15 cm. below the level of the placenta until the cord is pulseless. The venous pressure of the umbilical vein will determine the amount of blood it will receive from the placenta.

5. It must be remembered that in the hours shortly after birth, the ductus arteriosus is at least functionally open, and that any condition that reduces the systemic pressure below the pulmonary will allow blood to pass through the ductus into the aorta and thus bypass the lungs.

6. The exact relationship between the ductus arteriosus and the respiratory distress syndrome is unknown but a relationship does seem to exist.

7. At the present time it appears that it is more important for the obstetrician to bear in mind neonatal physiology than the time honored mechanism of labor.

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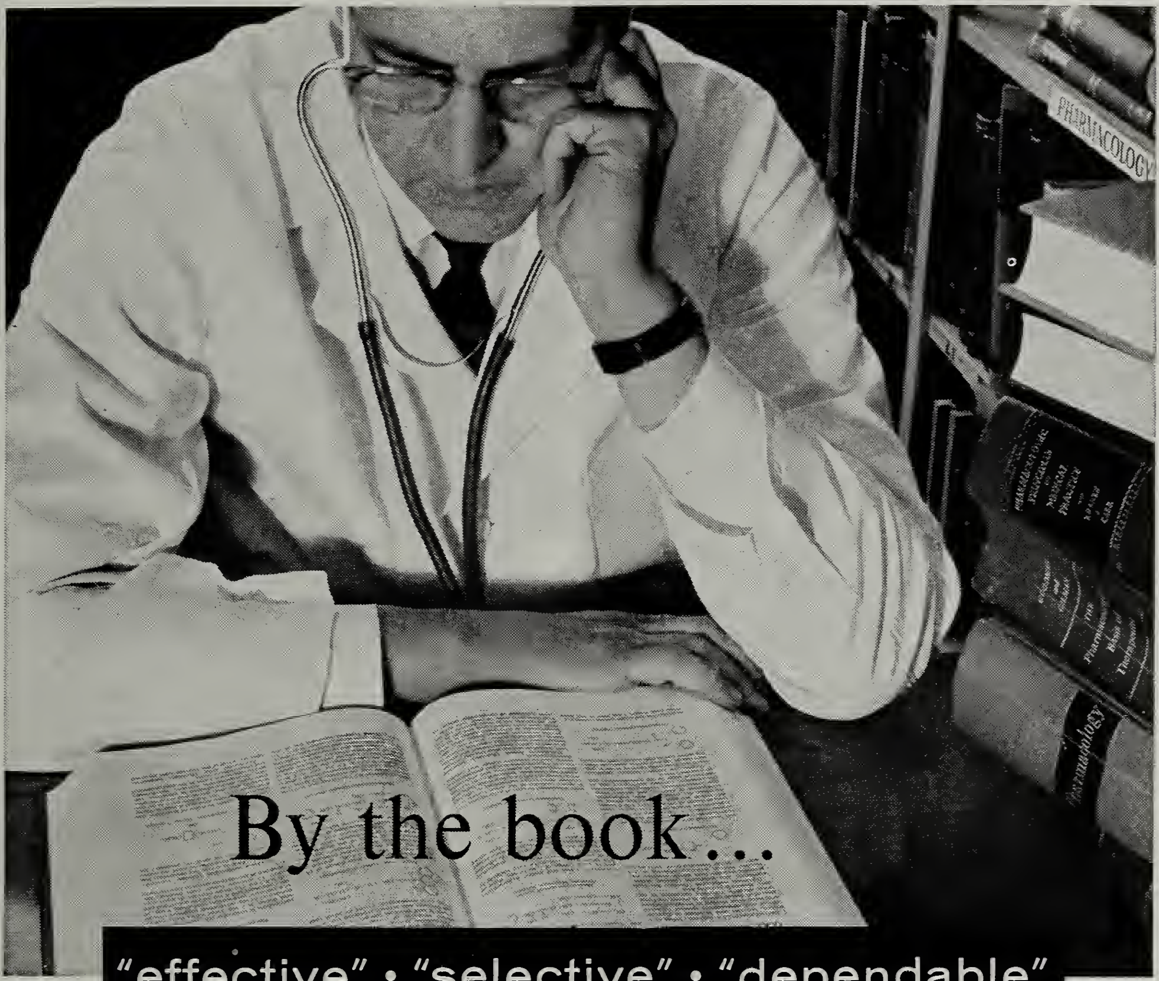

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AMA Clinical Session

Special Article

Delegates from Missouri who served at this meeting were Durward G. Hall, Springfield; Richard H. Kiene, Kansas City; Arthur W. Neilson, St. Louis, and J. Loren Washburn, Versailles, alternate for H. E. Petersen, St. Joseph. In addition, Rolla B. Wray, Nevada, alternate delegate; President Kenneth C. Hollweg, Kansas City; Past President, Victor B. Buhler, Kansas City; Hector W. Benoit Jr., Kansas City, Councilor, were among those present at the meeting. T. R. O'Brien and Ray McIntyre of the staff of MSMA, Gary Schnedler, Executive Secretary of the Greene County Medical Society, and Hollister Smith, Executive Secretary of the St. Louis Medical Society, were also present.

Richard H. Kiene introduced a resolution, which was approved by the delegates, requesting that an AMA representative appear in favor of H. R. 8426, which seeks to prevent physicians, nonprofit community blood banks or hospitals which do not obtain blood from any other blood bank, from being considered in restraint of trade for such acts under any law of the United States.

Durward G. Hall was the featured speaker at a breakfast under the auspices of the American Medical Political Action Committee. Dr. Hall discussed the doctor and politics, relating some of his own experiences in Congressional campaigns and urging all doctors to take an active interest in the political campaigns in 1964.

Tobacco and health, the rights and privileges of Negro physicians, revision of the AMA Constitution and Bylaws, voluntary health agencies and blood banks were among the major subjects acted upon by the House of Delegates at the American Medical Association's Seventeenth Clinical Meeting.

The AMA Layman's Citation for Distinguished Service was awarded for the sixth time, and for the first time at a Clinical Meeting, to Mr. M. Lowell Edwards of Santa Ana, Calif., and Brightwood, Ore. Mr. Edwards, a 65 year old retired engineer, has designed and built artificial heart valves now in use in more than 2,600 persons with diseased hearts.

The House at its opening session expressed deep shock at the tragic death of the late President John F. Kennedy and directed that a letter of heartfelt sympathy be sent to Mrs. Kennedy, her children and the late President's family. The House also pledged its support to President Lyndon B. Johnson in forging national unity in the weeks and months ahead and offered the Association's resources, counsel and cooperation on matters of health.

Proceedings of the House of Delegates of the clinical session of the American Medical Association held in Portland, Ore., December 1 to 4, 1963, are reported. Delegates from Missouri were Drs. Durward G. Hall, J. Loren Washburn, Richard H. Kiene and Arthur W. Neilson.

Dr. Edward R. Annis, AMA president, reporting on the recent House Ways and Means Committee hearings on the King-Anderson Bill, told the House:

"The combined testimony of the American Medical Association, the state societies and our allies made a far greater impact on the members of the committee, friend and foe alike, than at any other time in the history of this long and bitter conflict."

Dr. Annis also reported that under questioning from Committee Chairman Wilbur Mills, actuaries of the Department of Health, Education and Welfare admitted that the program of tax paid hospitalization and related benefits for the aged proposed in the King-Anderson Bill would require a tax rate twice as high as they have previously claimed.

Final registration at the Portland meeting reached a total of 7,103, including 3,144 physicians.

Tobacco and Health

The House approved a Board of Trustees proposal that the American Medical Association Education and Research Foundation undertake a "comprehensive program of research on tobacco and health."

Agreeing that many gaps exist in knowledge about the relationship between smoking and health, the House declared that the study should be "devoted primarily to determining which significant human ailments may be caused or aggravated by smoking, how they may be caused, the particular element or elements in smoke that may be the causal or aggravating agent, and methods for the elimination of such agent."

The action called for procuring a project director "whose experience, qualifications and integrity will assure that such a research project will be conducted effectively, exhaustively and with complete objectivity."

The House agreed that the project should be financed by a substantial contribution from the American Medical Association and that contributions should be solicited from other sources—industry, foundations, voluntary health agencies and physicians. It was emphasized that contributions will be accepted only if they are given without restrictions.

Subsequent to the House action, the AMA Board of Trustees voted to contribute $500,000 to help finance the research program.

NEGRO PHYSICIANS

The House considered two proposals related to Negro physicians—a Board report on hospital staff privileges and a resolution concerning membership eligibility in state and county medical societies. The Board report was approved, but the resolution was not adopted.

In adopting the Board report, the House declared that "members of the medical staff of every hospital, where the admission of physicians to hospital staff privileges is subject to restrictive policies and practices based on race, be urged to study this question in the light of prevailing conditions with a view to taking such steps as they may elect to the end that all men and women professionally and ethically qualified shall be eligible for admission to hospital staff privileges on an equal basis, regardless of race."

In both its approval of the Board report and its rejection of the proposed resolution—which would have denied the rights and privileges of AMA membership to members of any state or county society which refuses membership to any qualified physician because of race, religion or place of national origin—the House reaffirmed 1950 and 1952 policy actions on this subject and directed that a copy of the 1950 resolution again be sent to each state and county medical society. That resolution urged that "constituent and component societies having restrictive membership provisions based on race study this question in the light of prevailing conditions with a view to taking such steps as they may elect to eliminate such restrictive provisions."

AMA CONSTITUTION AND BYLAWS

The House approved comprehensive revisions and rearrangements of the Association's Constitution and Bylaws as submitted by the Council on Constitution and Bylaws. Among the changes are the following:

1. The Annual and Clinical "Sessions" have been renamed the Annual and Clinical "Conventions."
2. The word "constituent" has been changed to "state."
3. Two types of membership have been created, "Active" and "Special." Active Members are Regular or Service Members. Special Members are Associate, Affiliate and Honorary Members.
4. Affiliate Membership will be available to American physicians engaged in medical missionary and similar educational and philanthropic labors located in possessions of the United States.
5. A quorum will be 100 of the voting members of the House rather than 75.
6. A method has been established to replace a general officer who misses six consecutive meetings of the Board of Trustees.
7. A method has been established for the successor to the President to assume the Office of President if the President dies, resigns or is removed from office.
8. The Board of Trustees has been given express authority to appoint committees.

The House retained present provisions concerning voting on amendments to the constitution but agreed that this matter might be considered by the Committee to Review the Organization of the AMA House of Delegates.

VOLUNTARY HEALTH AGENCIES

In approving a Board report on professional relationships with voluntary health agencies, the House declared that "the AMA maintain its policy of neither approving nor disapproving national voluntary health agencies." It also agreed "that the AMA, through its Committee on Voluntary Health Agencies, maintain its position of offering guidance on medical aspects of national voluntary health agency programs."

The House approved the "Principles for Medical Guidance to National Voluntary Health Agencies" which contain a new definition of a voluntary health agency, objectives of the Committee on Voluntary Health Agencies and a list of suggested mutual obligations between the AMA and the national voluntary health agencies. The House directed attention to the following two obligations:

"There should be a mutual exchange of information and opinion enabling the medical profession and the agency to understand each other's policy and practice."

"A national voluntary health agency should seek the advice of the medical profession when embarking on a national medical program."

In another action, the House also agreed with a recommendation that the Committee on Voluntary Health Agencies be given the status of a council in the AMA organizational structure.

Blood Banks

The House adopted a policy statement pointing out that in recent years there has been a dramatic growth of blood banking facilities in the United States and declaring that "it is highly essential that the organization of new blood banking programs and the modification of existing ones should have, in the interest of public health and safety, the approval of the county or district medical society and, therefore, should be coordinated with existing approved blood banking facilities." The House also approved a floor amendment stating that since a blood bank can well be considered a medical facility, the top authority in a blood bank should be a physician.

Miscellaneous Actions

In considering a wide variety of reports and resolutions, the House also:

Changed the name of the Council on Scientific Assembly to the Council on Postgraduate Programs.

Extended AMA Affiliate Membership to scientists in sciences allied to medicine.

Changed the name of the Council on Medical Education and Hospitals to the Council on Medical Education.

Approved an amendment to the Bylaws which would permit the opening session of the House of Delegates to be held on Sunday afternoon or evening.

Expressed gratification that the work of the Committee on Medicine and Religion has received widespread acceptance and support from state and county medical societies, religious groups and other related organizations.

Received a report on the AMA Members Retirement Plan and urged physicians to act quickly if they are to exercise their rights under Public Law 87-792 during 1963.

Requested the AMA to seek improvements in the format of its *American Medical Directory* to make it easier to use.

Asked the Association staff to study the feasibility of opening the Clinical Meeting two Sundays prior to Thanksgiving Day.

Approved recommendations for criteria on medical examinations for driver limitation under certain specified conditions.

Suggested that an appropriate committee of the AMA work with the United States Public Health Service and the industry in providing a type of detergent that will assure safety to the health of the public.

Urged that the term "the aging" be used instead of "the aged" in all statements by the medical profession regarding older persons.

Approved the *Guides for Medical Society Committees on Aging* and recommended their wide distribution and use.

Received a progress report from the *Commission on the Cost of Medical Care,* which will present its final report in June 1964.

Agreed that the Committee on Rehabilitation should be reconstituted and that it should include participation of knowledgeable representatives of all related fields of the practice of medicine.

Earnestly recommended that the state medical societies explore the advantages of implementing Kerr-Mills programs in a manner which will permit the care of beneficiaries under voluntary health insurance programs.

Resolved that the AMA attempt to have removed from the Kefauver-Harris Amendment those provisions which authorize the U. S. Food and Drug Administration to determine the effectiveness of drugs.

Reaffirmed the Association's policy of opposing the inclusion of self-employed physicians under Social Security.

Agreed that a short form medical record may be used in cases of a minor nature and, in general, should apply to hospital stays of 48 hours or less.

Approved a Board of Trustees conclusion that the Honors and Scholarship Program, originally proposed in 1960, not be implemented in the light of present circumstances.

Urged all AMA members to continue to sup-

(Continued on page 115)

SOLOMON GARB, M.D., ***Columbia***

Thermonuclear Survival

Special Medical and Nursing Civil Defense Problems

This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine*, and are published with permission of that journal.

Dr. Garb is secretary of Medical Education for National Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.

Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.

In planning their civil defense roles, the doctor and nurse must not only provide for the survival of themselves and their families, but also must be prepared to render practical assistance to other survivors. The first principle to keep firmly in mind is that a dead or dying doctor or nurse is of no value to other survivors. There is a great danger that doctors and nurses who survive the initial blast may, in their eagerness to help other survivors, lose their own lives needlessly. For every doctor or nurse who dies one may estimate that about 200 short-term survivors, who might have been saved by appropriate care in the six weeks following an attack, will also die. Unfortunately, some of the original plans for the use of doctors and nurses in a thermonuclear attack had basic defects which could have caused the needless deaths of all involved. Thus, it is vital to understand the defects in such plans, and to revise them accordingly.

At one time, there were plans to transport doctors and nurses into the impact area, to render assistance to people with mechanical injuries from blast and flying objects. Let us consider these plans in the light of what is known about the hydrogen bomb's effects. A 20 megaton bomb will produce mechanical injuries from blast, collapsing houses and flying objects over a radius of 10 miles (314 square miles). For a few minutes after the blast, there will be no fallout; then, after a variable interval, depending on several factors, fallout will come down. One cannot predict exactly when the fallout will descend in a certain area, but it should begin within 30 minutes. This so-called immediate fallout is far more intense than the distant fallout which extends over tens of thousands of square miles. Also, it covers the entire blast-damage area, regardless of wind direction. At H hour + 1, the fallout radiation level in the blast damage area will be at least 5,000 r. per hour. Exposure for six minutes or less would be lethal to persons not in shelters. Doctors and nurses going into such an area soon after an attack would certainly perish. Furthermore, their deaths would be useless, since any patients exposed in that area would also receive a lethal dose of radiation in a few minutes.

Therefore, it is recommended that doctors, nurses and other persons avoid going into any blast-damage area for at least two days after an attack, and preferably at least two weeks. The patients in the blast-damage area probably cannot be saved by anyone from other areas during the first two days. This does not mean that they must be abandoned to die, however. Adequate civil defense preparations and training of the population could save the lives of many who are injured by blast. The first requirement is that there be enough community shelters in the area. Also, basic first-aid measures should be learned by most of the population. One basic first-aid principle will have to be changed, however: the principle of "splint them where they lie" is not applicable to a hydrogen bomb blast. The immediate fallout may come down within 10 or 20 minutes, too short an interval for splinting and transporting casualties. Furthermore, the radiation intensity at 10 or 20 minutes after H hour may be over 20,000 r. per hour, so that a two minute exposure would be lethal. A first-aid worker who was busy splinting a casualty would not have enough time to get to shelter himself in such a situation. There is only one apparent solution to this problem: the injured must be carried or dragged to the nearest shelter at once by the nearest companions, without splinting or first aid. Once inside the shelter, first aid measures may be instituted. This is certainly a severe solution, and undoubtedly the movement of unsplinted fracture patients to shelters will, in many instances, precipitate shock and cause other fatal complications. Nevertheless, this procedure offers a reasonable chance of survival to the fracture patient who can be moved to a shelter within 10 minutes. The alternate procedure, splinting in place before movement to shelter, would result in close to 100 per cent deaths from fallout in fracture patients, as well as the unnecessary deaths of an equivalent number of first aid personnel.

The training of the entire population in basic first aid measures for use inside the shelter would certainly be of major value. In addition, there should be other people with more advanced first aid training who can assume greater responsibility, particularly since there will not be nearly enough doctors and nurses to go around.

Clearly, each doctor and nurse will be faced with an impossible work load compared to peacetime standards. In many cases, a single physician or nurse may have to care for 200 seriously ill patients with no other professional help. In such circumstances, it will be necessary to form a plan designed to save as many lives as possible. The first points to consider are the estimated types and proportions of casualties. These are discussed as percentages of the total incapacitated—not as percentages of the total population. Since some persons will suffer more than one type of injury, the total percentage will be greater than 100. It should also be noted that these percentages are based on the areas involved in different effects of the hydrogen bomb. There would be marked variations from place to place and the estimates are for the nation as a whole, based on present civil defense accomplishments. Obviously, with more effective civil defense, the proportions would change.

Types of Injuries

1. Killed outright would be approximately 10 per cent of total casualties.

2. Multiple injuries in blast damage zone which would be fatal even with the best treatment would be 10 per cent. There is no reasonable likelihood that most of this group could even receive the benefit of narcotic drugs to ease their last moments.

3. Persons with fractures and lacerations in blast damage zone not able to receive professional care because doctors and nurses are not in the shelter would be about 5 per cent.

This substantial group of patients will depend for survival on the training and ability of laymen who are in the same shelter. Therefore, I recommend that a substantial proportion of the population be trained in advanced first-aid technics, so that they can give the most effective care possible to these injured. There is a nucleus in former military medical aid men, boy scouts and others. Volunteers from these groups could be taught enough advanced first aid to save the lives of many of the injured.

4. Persons with fractures and lacerations in blast zone able to receive initial professional care because a doctor or nurse happens to be in the shelter would be less than 1 per cent. These cases will have a reasonably good chance of survival even without additional planning.

5. Lacerations from broken glass in areas 10 to 50 miles from ground zero would run 5 per cent. These victims are likely to swamp existing hospitals unless trained and taught to take a better course. They will have a grace period of 30 to 90 minutes before fallout descends. If they go to hospitals unprepared to shelter them from fallout, they will probably die of fallout radiation. A better solution would be to have these victims go to shelters where advanced first aid workers can stop bleeding with pressure bandages, and give other life-saving care. After a period of two days to two weeks, it may be possible to get professional surgical help to repair the worst cases.

6. Burn cases with chance for survival would approximate 20 per cent. Most of these will be flash burns sustained at distances up to 25 miles from ground zero. The usual peacetime treatment for burns, which takes so much professional care—much more than major surgery—would not be possible. Here, too, the training of advanced first-aid workers in emergency treatment of burns, including the administration of the appropriate mixture of salt and bicarbonate of soda orally, would save many lives.

7. Radiation sickness would afflict 80 per cent. Radiation sickness is likely to be the major effect of a thermonuclear attack. It would be seen all through the nation, except in persons who get to a good shelter promptly and stay there for the proper length of time. Radiation sickness cases would begin soon after an attack, and increase in frequency up to about two weeks after the last weapon is detonated. The details of

diagnosis and treatment are described in many excellent publications and need not be repeated here. However, it is appropriate to point out that there are no specific anti-radiation drugs available. The major therapeutic modality will be good general nursing care. This is a time-consuming job. A single doctor or nurse may have to be responsible for hundreds of these patients. In such a situation, it is obviously impossible for a doctor or nurse to provide the care personally. Instead, they will have to recruit, train and direct others in basic technics of caring for the sick. Any training which can be done before the emergency will be of great value in saving lives.

With an adequate shelter program, the number of cases of radiation sickness would be markedly reduced. However, there would probably be a substantial number, even with a good shelter program. Some people may delay in getting to shelters, others may leave the shelter too early and, in some cases, shelters with minimum protective shielding may reduce the radiation dosage below the lethal level, but not below the level producing sickness.

8. Secondary epidemics would afflict from 10 to 90 per cent. Secondary epidemics have frequently accompanied wars and killed more people than weapons. After an attack, there will be multiple dangers from epidemics—even if the attacker does not use agents of biological warfare. The usual epidemic diseases, such as typhoid and plague, already have endemic foci within this country. They are kept under control by excellent sanitary facilities. After a thermonuclear attack, many of these facilities would be destroyed. Unless stringent action is taken, these diseases could sweep the nation. First, it will be necessary to teach the public the need for strict sanitation. Secondly, regulations for purifying water and disposing of excreta will have to be established and strictly enforced, for an indefinite period after an attack. Clearly, any measures which could be taken in peacetime would help make the problem manageable.

It would be a great help if everyone maintained their immunity to smallpox and tetanus by periodic boosters. Special risk groups should also be immunized against typhoid and typhus.

A second problem is that under the stress and crowding of post-attack living, microorganisms which have not usually been dangerous will overwhelm the body defenses of some persons, become more virulent, and start epidemics. Such epidemics could be even more dangerous than typhoid—and there are no protective vaccines available. An effective defense would be the maintenance of good general health. Nutrition should be adequate—and this country has the surplus food to make it so.

In addition, efforts should be made to see that everyone has adequate rest in the post-attack phase. Some volunteers may try to work too hard and too long. Although their intentions may be good, they may unwittingly start, or help spread, an epidemic of respiratory disease by lowering their own resistance. Doctors, nurses and other responsible trained persons should insist that no one go without adequate rest. This applies also to the doctors and nurses themselves.

STOCKPILING MEDICAL SUPPLIES

The medical and nursing professions should participate more actively in the planning for stockpiles of medical and surgical supplies for emergency use. In some categories, there is now a large stockpile, but in other cases, the stockpiles appear to be inadequate.

It may be helpful to discuss a few of the items which are, or should be, stockpiled. The list discussed is by no means inclusive, but merely a set of examples. It is hoped that more extensive participation by the medical and nursing professions in the planning of medical stockpiles will result in identifying and correcting any other areas of imbalance.

A. *Narcotics.*—The stockpile of morphine, according to newspaper reports, is adequate. One wonders how the morphine is going to get from the warehouses to the patients in time to do any good. The morphine would be needed within minutes to hours of an attack. It could do little good two or three days later. Furthermore, morphine is of no value and may be contraindicated in radiation sickness and the other late effects of a hydrogen bomb attack.

B. *Anti-emetics.*—The drugs which have anti-emetic actions could be of a tremendous value in managing radiation sickness. A characteristic feature of radiation sickness is vomiting. If the total radiation dose is administered within a short time, the vomiting may last for a few hours only. However, if the radiation is absorbed over a period of days, which would be the case with many victims after an attack, the vomiting tendency could also last for days. Vomiting is not only uncomfortable—it can be, and has been, fatal. Physicians are now so accustomed to the availability of parenteral fluids that one sometimes tends to forget how serious persistent vomiting can be in their absence. It is generally considered that a person who receives 200 r. of radiation will survive although he will vomit and have other symptoms. However, this is based on the availability of peacetime therapeutic measures. After a thermonuclear attack, when parenteral fluids are not available, a person who receives 200 r. of radiation and vomits for a day or two may die of the added effects of dehydration and electrolyte imbalance. The anti-emetic drugs have been proven effective against the vomiting induced by radiation. They can be given orally or by injection. They are relatively inexpensive, compact, easy to store and have a long storage life. They also have tranquillizing effects. The best are probably the chlorpromazine derivatives. If one had a group of several hundred patients with radiation sickness, beginning to vomit, it would be impossible to give them parenteral fluids, even if such fluids were available. However, the anti-emetic drugs could stop most of the vomiting and save the lives of most of the patients. Accordingly, I recommend that these drugs be stockpiled in large quantities. To the best of my knowledge, they are not being stockpiled as yet.

C. *Antibiotics.*—The need for stockpiling antibiotics seems obvious. Apparently, some stockpiling is being done on a small scale. However, there is reason to believe that the amount being stocked is only a small proportion of the probable need.

D. *Vaccines.*—Some stockpiling of vaccines is taking place, but apparently it too is quite inadequate.

E. *Surgical instruments.*—Not only are there not nearly enough surgical instruments for a thermonuclear attack, but not even enough to cope with ordinary peace-time disasters. This was brought out graphically during the Worcester (Mass.) tornado, but apparently the lesson was lost. Most hospitals do not have enough surgical instruments to permit continuous use of their operating rooms in emergencies. In illustration, consider a hospital which has 10 operating rooms, plus two rooms in the emergency suite which could be used for surgery. Theoretically, it should be possible, in an emergency, to have 10 to 12 surgical teams, with some internists, pediatricians and obstetricians acting as assistants. However, to run 12 major operations at a time, continuously and without delay, requires 24 complete sets of surgical instruments. While twelve sets are in use, the other twelve are being washed, packed and sterilized. It is doubtful if a significant number of hospitals have such instruments. Indeed, some preliminary inquiries suggest that few hospitals with 12 operating rooms even have 12 complete sets of instruments suitable for emergency surgery or major casualties of a civilian or military disaster. Of the 12 operating rooms, some are designated for surgical specialties such as ophthalmology, otolaryngology and urology and are equipped with the specialized instruments only. In a disaster, there would, of course, be some cases requiring such specialized instruments. However, the vast majority of cases would need the instruments used in general and orthopedic surgery.

In the Worcester tornado, the surgeons encountered this problem. There were not enough instrument sets to permit continuous use of the operating rooms if the instruments were cleaned and sterilized between operations. Accordingly, many surgeons resorted to the expedient of just washing the instruments in tap water and using them on the next case without sterilization. This probably contributed to the extremely high rate of postoperative wound infections.

It is hoped that the medical and nursing professions will take the initiative in having this deficiency corrected at least in their own hospitals. Whether the additional instruments are purchased by local groups or by the federal government is a matter to be considered.

F. *Blood Transfusion Apparatus.*—The development of plastic containers for blood has simplified the problem of stockpiling. The limited life of bank blood is still the major obstacle to the storage of large amounts of whole blood. However, vigorous research in this area might provide a solution. In the meantime, blood transfusion apparatus could be stored in large amounts, using minimum space and at a relatively low cost. After an emergency, the uninjured could then provide fresh blood for their injured and sick fellows. To be sure, this would only be of limited benefit since there would not be enough doctors, nurses and technologists to draw, match and administer all the blood needed. Nevertheless, it could save many lives. I am not aware of any substantial stockpiling of this type of apparatus as yet.

G. *Portable Hospitals.*—There is a substantial number of portable hospitals stored on the periphery of target areas. This stockpiling seems to be reasonably effective. However, some calculations suggest that the number of hospitals stored is only a fraction of the number which would be needed. Furthermore, there seem to be some serious omissions in the planning. A

200 bed hospital would require the services of more than 200 helpers. The total number of persons involved would require substantial toilet facilities, especially since diarrhea is a symptom of one stage of radiation sickness, and because of the need to avoid secondary epidemics. Existing plans call for establishing the emergency hospitals in schools, churches, armories and such. Presumably the existing toilet facilities in these buildings are to be used. However, such toilets can only work if the water pipes to them are intact, and if there is electric power available at the pumping station. (The portable gasoline generators used with portable hospitals would not be adequate.) Since any major attack would probably put these services out of commission for a long period of time, a shortage of toilet facilities could cripple the operation of the emergency hospitals and spread epidemics. Accordingly, it seems advisable to include portable collapsible field toilets in adequate numbers with each emergency hospital.

USE OF PROFESSIONAL PERSONNEL OTHER THAN PHYSICIANS

In the event of a thermonuclear attack, the number of physicians available will be far too small to give even reasonably adequate care to the injured and sick. Accordingly, plans have been developed to utilize other professional groups with some medical or paramedical background in place of physicians. The American Medical Association, on April 15, 1959, presented a plan for emergency medical care, including usage of other professional groups. Unfortunately, this plan seems not to be widely known among the groups who will be responsible for implementing it. It is suggested that each physician obtain a copy of this and any subsequent reports and familiarize himself with it. In addition, the medical profession in each area should provide preparation and training to health personnel other than physicians so that they may perform their assigned tasks effectively. The professions discussed in the AMA report include: veterinarians, dentists, nurses, technicians, technologists, therapists, optometrists, podiatrists, pharmacists, social workers, psychologists, dieticians and ambulance drivers. It may be helpful to consider some of the additional functions recommended for nurses, as an example. They include: (a) first-aid, including but not limited to artificial respiration, emergency treatment of open chest wounds, relief of pain, treatment of shock and preparation of casualties for movement; (b) maintenance of patent airway, including intratracheal catheterization and emergency tracheotomy; (c) control of hemorrhage; (d) cleansing and treatment of wounds; (e) bandaging and splinting; (f) management of psychologically disturbed; (g) management of all normal deliveries, and (h) operation of treatment and aid stations.

Other functions are also listed in the AMA report, and it is likely that subsequent revisions will include additional responsibilities such as management of burn cases.

It should be noted that the emergency functions assigned to these other professional groups include major segments of current medical and surgical practice. They should not be confused with ordinary first-aid or self-help training programs.

The subjects discussed in this article should demonstrate clearly the need for greater participation of physicians, nurses and other professional personnel in civil defense planning. If these groups do not participate more actively in such planning, one can hardly expect to avoid serious errors and deficiencies in the program.

AMA CLINICAL SESSION

(Continued from page 110)

port the Woman's Auxiliary so that it can be successful in increasing its membership, raising more revenue and broadening its range of activities.

CONTRIBUTIONS AND TRIBUTES

Merck Sharp and Dohme pharmaceutical company made its third contribution of $100,000 to the student loan fund of the American Medical Association Education and Research Foundation. The AMA-ERF also received a total of almost $400,000 from physicians in three states for financial aid to medical schools. The House paid tribute to Mr. Thomas A. Hendricks, who is retiring on December 31, for his 20 years of AMA service. Dr. Annis was "commended and encouraged in his great work for private enterprise and free American medicine." By a rising vote of acclamation, the House also expressed appreciation to Dr. Jesse D. Hamer, Phoenix, Ariz., who is retiring after 30 years as a delegate.

who were the “untreatables”?

From their inception with cortisone, to the present-day variants of the steroid molecule, the corticosteroids have presented a therapeutic paradox. The beneficial action against inflammation and allergy as well as several undesirable metabolic effects are all, apparently, the results of the same basic physiologic action.[1]

Some of these associated metabolic reactions made it risky or otherwise undesirable to treat with steroids large numbers of patients in various categories who would otherwise have benefited from such management. These "untreatables" were overweight, had cardiac disease, hypertension, or pulmonary fibrosis associated with congestive heart failure. Also in this category were those patients whose emotional symptoms were aggravated by earlier steroids.

But the advent of ARISTOCORT® Triamcinolone in 1958 – the result of biochemical and pharmacologic research which successfully stripped away many important undesirable hormonal effects from the primary anti-inflammatory action – dramatically changed this picture. This steroid did not overstimulate the appetite, or cause the excessive weight gain induced by other steroids;[2-7] it proved to have one of the best records of any steroid for *not* causing edema, or salt-and-water retention;[2,3,7-10] and the incidence of undesirable euphoria with this agent was remarkably low.[2,4,5,9,10] What is most significant is that these benefits have stood the test of more than 5 years of widespread use. And, of course, the avoidance of these distressing hormonal effects benefited *all* patients requiring steroids, not just those in the special categories, as demonstrated by wide clinical use.

Side Effects. Since it may, under some circumstances, produce any of the unwanted effects common to all cortisone-like drugs, discrimination should always be exercised in administering ARISTOCORT® Triamcinolone. Any of the Cushingoid effects are possible, as are purpura, G.I. ulceration, increased intracranial pressure and subcapsular cataract. Corticosteroids generally may mask outward signs of bacterial or viral infections. Catabolic effects to watch for include muscle weakness and osteoporosis. Weight loss may occur early in treatment but is usually self-limiting.

Contraindications. While the only absolute contraindications are tuberculosis and herpes simplex, there are some relative contraindications (peptic ulcer, glomerulonephritis, myasthenia gravis, osteoporosis, fresh intestinal anastomoses, diverticulitis, thrombophlebitis, psychic disturbance, pregnancy, infection) to weigh against expected benefits.

While no steroid can *cure* a susceptible disorder, many patients who would otherwise be confined in a state of invalidism have, on ARISTOCORT® Triamcinolone, been able to pursue active, useful lives.

References: 1. Levine, R.: Rationale for the Use of Adrenal Steroids, Paper presented at Annual Convention, Medical Society of the State of New York, New York, May 13-17, 1963. 2. Hollander, J. L.: Clinical Use of Dexamethasone. *JAMA 172*:306 (Jan. 23) 1960. 3. Boland, E. W.: Chemically Modified Adrenocortical Steroids. *JAMA 174*:835 (Oct. 15) 1960. 4. McGavack, T. H.: The Newer Synthetic Adrenocortical Steroids in Therapy. *Nebraska Med. J. 44*:377 (Aug.) 1959. 5. Freyberg, R. H.: Berntsen, C. A., Jr., and Hellman, L.: Further Experiences with Δ1, 9 Alpha Fluoro, 16 Alpha Hydroxyhydrocortisone (Triamcinolone) in Treatment of Patients with Rheumatoid Arthritis. *Arthritis Rheum. 1*:215 (June) 1958. 6. Cahn, M. M. and Levy, E. J.: Triamcinolone in the Treatment of Dermatoses. *Amer. Practit. 10*:993 (June) 1959. 7. AMA Council on Drugs: New and Nonofficial Drugs. *JAMA 169*:255 (Jan. 17) 1959. 8. McGavack, T. H.; Kao, K.-Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: Clinical Experiences with Triamcinolone in Elderly Men. *Amer. J. Med. Sci. 236*:720 (Dec.) 1958. 9. Fernandez-Herlihy, L.: III. Use and Abuse of Corticosteroid Therapy—The Structure and Biologic Activity of the Corticosteroid Hormones and ACTH, *Med. Clin. N. Amer. 44*:509 (Mar.) 1960. 10. McGavack, T. H.: Triamcinolone: A Potent Anti-inflammatory Sodium Excreting Adrenosteroid. *Clin. Med. 6*:997 (June) 1959.

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Kenneth C. Hollweg, M.D.

President's Message

With the hats going in the ring and the primaries being entered, it makes one realize that this is a big election year, not only for some senators and representatives, but from the top on down.

Some medical issues may be settled before the time of the elections, but they probably will not and, even if they are, there will be others.

So MMPAC and AMPAC are going to be quite busy organizations during this year. And we all know quite well that they cannot be busy protecting the practice of medicine and the free enterprise system if they do not have the financial support of the medical profession.

I have made many pleas, both through this Message and personally, that members of the medical profession support these organizations and I wish to make this plea again. Please protect yourselves, your patients and the future of medicine by supporting MMPAC and AMPAC.

Why not send your check for $25.00 today. This will cover dues in both AMPAC and MMPAC and it at least should be a starter. It should be sent to James C. Sisk, M.D., Treasurer, 111 N. 4th St., St. Louis 2, Mo.

Kenneth C. Hollweg MD

EDITORIAL

CONTROL OF POLIOMYELITIS

That the gains in control of poliomyelitis following the introduction of the Salk vaccine in 1955 and of the Sabin oral vaccine in more recent years is pointed up well by statistics on the disease.

In the years 1950 to 1954, an average of almost 39,000 poliomyelitis cases a year were reported in the United States, the number reaching a high of about 58,000 in 1952. Only 910 cases of the disease were reported in 1962, and it appears that the total number for 1963 will be less than half the number in 1962. Currently, paralytic cases account for about 85 per cent of the total reported.

A marked reduction has also been recorded in the mortality from poliomyelitis since the introduction of mass immunization programs. Deaths from the disease decreased from 1,043 in 1955 to 47 in 1962. In the peak year, 1952, the number was 3,145. The poliomyelitis death rate fell from 20.2 per million population in 1952 to 6.3 in 1955 and to 0.3 in 1962.

The incidence of poliomyelitis has reached such a low level in this country that not a single case of the disease was reported in 15 states and the District of Columbia during the first 44 weeks of 1963. The West North Central and Mountain states reported only five cases, and New England only eight. Of the 362 poliomyelitis cases reported through November 2, more than 40 per cent were concentrated in two states, Pennsylvania with 101 and Alabama with 51.

Similar results have also been achieved in other countries where immunization programs were conducted on a large scale. In Canada, a record low of 86 paralytic cases were reported in 1962, equivalent to a rate of 0.5 per 100,000 population. The rate has continued at this low figure in 1963. In contrast, the case rates a decade ago were 11.8 per 100,000 in 1952 and no less than 28.5 in 1953.

In England and Wales the total number of cases varied widely from year to year prior to the inauguration of the immunization program in 1956, averaging nearly 4,000 annually in the five year period preceding that date. In 1962 the number was less than 300, and the indications are that the total for 1963 will be much below that figure.

Most cases of poliomyelitis in the United States now occur among young people who have not been adequately immunized. As of September 1962, nearly four and a half million children at ages 1 to 4 years—one fourth of the population at these ages—had received either no Salk vaccine or the indequate protection afforded by one or two injections. In the same situation were about 5,100,000 children of ages 5 to 14 and about 2,900,000 at ages 15 to 19. Although the use of the oral vaccine has been increasing rapidly, there are still many millions of susceptible children and young adults who have not availed themselves of the protection it provides.

In recent years more than one fifth of the paralytic cases and more than half of the deaths from the disease occurred among persons more than 15 years of age.

Even if poliomyelitis were completely wiped out in the near future, there would still be the problem of caring for those who had been stricken and left with varying degrees of residual disability. According to a recent finding of the National Health Survey, it is estimated that there are about 120,000 cases of complete or partial paralysis among the survivors of a poliomyelitis attack. Two thirds of these are less than 45 years of age.

DEATHS

Shrout, Cecil B., M.D., Bunceton, a graduate of National University of St. Louis, 1914; member of West Central County Medical Society; aged 72; died November 27, 1963.

Koenig, Karl F., M.D., St. Louis, a graduate of Washington University, 1931; member of St. Louis Medical Society; aged 64; died December 3, 1963.

Meisenbach, A. Edward, M.D., St. Louis, a graduate of Marion Sims College, 1914; member of St. Louis Medical Society; aged 93; died December 8, 1963.

News—Personal and Professional

The medical staff of St. Mary's Hospital, Jefferson City, recently elected **Landon H. Gurnee**, M.D., as president; **Francis X. Meier**, M.D., vice president, and **William A. Cox**, M.D., secretary-treasurer. Drs. **John I. Matthews** and **Julian A. Ossman** were elected to the staff's executive committee.

The St. Louis Academy of General Practice installed **Charles A. Nester**, M.D., St. Louis, as president at a dinner meeting on December 7.

The medical staff of Peoples Hospital, St. Louis, recently elected **William E. Allen Jr.**, M.D., as chief of staff and **Leslie E. Bond**, M.D., as vice chief.

The Southwest Missouri Chapter of the American College of Surgeons at a meeting in Springfield elected **Michael J. Clarke**, M.D., Springfield, president; **Dale Alquist**, M.D., Joplin, vice president, and **F. Thomas Moseley**, M.D., Springfield, secretary-treasurer.

Following the showing of films on cancer which were viewed by more than 2,400 women in Jefferson City, Drs. **Harold C. Stricker, Everett D. Sugarbaker, Alvon C. Winegar** and **C. Stuart Exon** answered questions from the audience.

A two part history of early Callaway Doctors and their experiences was compiled by **R. N. Crews**, M.D., Fulton, and carried in the *Fulton Sun-Gazette.*

Newly elected officers of the staff of St. Vincent's Hospital, Monett, are **Mary J. Newman**, M.D., Cassville, president; **A. J. Graves**, M.D., Mount Vernon, vice president, and **F. L. Edwards**, M.D., Monett, secretary.

Among speakers at a meeting in San Juan, Puerto Rico, in January, was **Richard A. Sutter**, M.D., St. Louis. He discussed "Medical Services to Multiple Small Plants."

The Madison Memorial Hospital staff recently elected **C. W. Chastain**, M.D., Farmington, as chief of staff.

Recently elected president of the Carroll County Memorial Hospital staff, Carrollton, was **John Platz**, M.D., Carrollton. **E. W. Allen**, M.D., Carrollton, was elected vice president.

The staff of the Cass County Memorial Hospital at Harrisonville, recently elected **David S. Long**, M.D., Harrisonville, as chief of staff.

At a recent meeting of the Southern Medical Association, **Ben H. Senturia**, M.D., St. Louis, was elected chairman of the section of otolaryngology.

Recently named president of St. John's Hospital, Joplin, is **L. H. Ferguson**, M.D., Joplin. **D. R. Patterson**, M.D., was elected vice president.

The St. Louis Heart Association recently elected **James P. Murphy**, M.D., as president-elect.

The Missouri Association for Mental Health presented a certificate to **Louis H. Kohler**, M.D., St. Louis, on December 7 for his services to mentally ill persons in Missouri.

A new member of the board of directors of the American Rhinologic Society is **Pat A. Barelli**, M.D., Kansas City.

Acting as chairman of the committee on bylaws, **C. A. Brashear**, M.D., Mount Vernon, conducted a meeting during the interim clinical meeting of the American College of Chest Physicians in Portland, Ore., recently. He also served as a discussant in a fireside conference on "Tuberculosis: Early Diagnosis, Primary Tuberculosis, Chemoprophylaxis."

(Continued on page 122)

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A potent analgesic and
a superior muscle relaxant

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Ramblings of the Field Secretary

During recent years there has been considerable attention paid to the number of students applying for entrance to medical schools, the number admitted and the number graduating each year. Some statistics relating to these points of concern would seem to be in order.

The total number of medical students enrolled in the 87 U. S. medical schools was 31,491 for the 1962-1963 academic year according to the November 16, 1963, issue of the *Journal of the AMA.* The journal further reports that this figure represents an increase in total enrollment of 413 students (1.3 per cent), while the increase in the number of first year students was 159 (2.2 per cent). Further, states the journal "the number of graduates was 7,265 for the 1962-1963 year, an increase of 96 over the previous year. This increase in graduates of 1.4 per cent was slightly less than the average increase in medical school graduates over the past decade of about 2 per cent and also significantly less than the average annual increase of the U. S. population for the last decade of 1.7 per cent."

In additional discussion of this matter the journal says, "The current data indicate that the decrease in applicants for entering classes of medical schools which has been fairly constant since 1949 reached its low point in the 1961-1962 year and is now on the upward swing. As reported by the Association of American Medical Colleges 15,847 students applied for places in the first year class for the 1962-1963 year, an increase of 1,466 (10 per cent) over the preceding year. Preliminary estimates indicate that the number of applicants for the 1963-1964 classes have again increased at least 15 per cent. Primarily because of the increasing number of students expected to graduate from colleges and universities, it is likely that the number of applicants to medical schools will increase substantially during the next several years.

"Since 1960, when there was 'widespread concern because of the decreasing numbers of qualified students' applying to medical school, there has been an increased activity and variety of recruitment programs in medical schools, medical societies and medical organizations. At that time only 30 schools had active programs. Now 49 schools have formal programs. Besides the activity of the medical schools, the American Medical Association, Association of American Medical Colleges, local medical societies and the Student American Medical Association, to mention a few, continue to conduct large-scale programs.

"In the past two years, there has been a sharp upturn in the number of applicants which has dissipated some of the interest in recruitment. Two schools reported that due to the plethora of applicants, 'formal recruitment' was not contemplated. Medicine, however, continues to compete with an increased number of 'status professions' for the top students. These students have intimate contact with the proponents of these other disciplines during their college years—at a time when they have little or no exposure to medicine. Thus, in spite of increased applicant pressure, continued recruitment seems necessary."

NEWS

(Continued from page 120)

"A Modern Medical Program for the Small Plant" was the subject of a talk given by **Richard A. Sutter,** M.D., St. Louis, at a recent meeting of the National Safety Council.

Recently installed as president of the Kansas City Society of Ophthalmology was **Williston P. Bunting,** M.D.

The new president of the Downtown Kiwanis Club, Kansas City, is **James E. Tesson,** M.D., Kansas City.

The Student American Medical Association, at its 1963 annual meeting, set up a sustaining membership of the organization. This is open to any physician for a fee of $10.00 annually. Physicians should address applications for sustaining membership to the Student American Medical Association, 333 N. Michigan Ave., Chicago 1, Ill.

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MISSOURI STATE MEDICAL ASSOCIATION

Preliminary Program

106th Annual Session

Hotel Chase, St. Louis

March 8, 9, 10, 11, 1964

Sunday, March 8, 1964

12:00 noon Registration of Delegates. Lobby floor.

1:30 p.m. House of Delegates, Khorassan Room.

3:00 p.m. Reference Committee meetings.

3:00 p.m. Reports of Officers, Coach Room.

3:30 p.m. Constitution and By-laws, Park Room.

4:00 p.m. Miscellaneous Affairs, Paladium Room.

4:30 p.m. Resolutions, Colonial Room.

4:45 p.m. Necrology, English Room.

6:30 p.m. Missouri Diabetes Society dinner meeting, Stockholm Room.
Relationship Between Severity of Diabetes and Insulin Secretory Reserves, Holbrooke S. Seltzer, M.D., Dallas, Tex.

Monday, March 9, 1964

8:00 a.m. Registration. Lobby floor.

9:00 a.m. Panel: What's New, Khorassan Room.
Moderator: Thomas F. Frawley, M.D., St. Louis.
New Trends in Medicine: William D. Davis Jr., M.D., New Orleans.
New Trends in Surgery: Thomas L. Marchioro, M.D., Denver.
New Trends in Allergy: Charles W. Parker, M.D., St. Louis.
New Trends in ENT: John J. Shea, M.D., Memphis, Tenn.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Panel: Current Concepts in Treatment of Chronic Renal Disease, Khorassan Room.
Moderator: C. Thorpe Ray, M.D., Columbia.
Problems Involved in an Artificial Kidney Center Devoted Solely to Chronic Dialysis, F. K. Curtis, M.D., Seattle.
Some Problems Involved in Human Homo-transplantation, Thomas L. Marchioro, M.D., Denver.

12:00 noon 50 Year Club Luncheon, Park Room.
M. K. Underwood, M.D., Rolla, presiding.

12:00 noon Committee on Maternal Welfare Luncheon, Regency Room.
Speaker: Arthur L. Haskins, M.D., Baltimore, Md.

12:00 noon Luncheon Fireside Conference, Colonial Room.
Vagrant Acid Fast Organisms in Pulmonary Disease: The Physician's Dilemma.
Moderator: Karl H. Pfuetze, M.D., Hinsdale, Ill.
Panelists:
Raymond F. Corpe, M.D., Rome, Ga.
Ernest H. Runyon, Ph.D., Salt Lake City, Utah.
John H. Seabury, M.D., New Orleans, La.
Henry C. Sweany, M.D., Mount Vernon, Mo.

Medical Session, Lido Room.

2:00 p.m. Panel: Liver Disease.
Moderator: Robert E. Koch, M.D., St. Louis.

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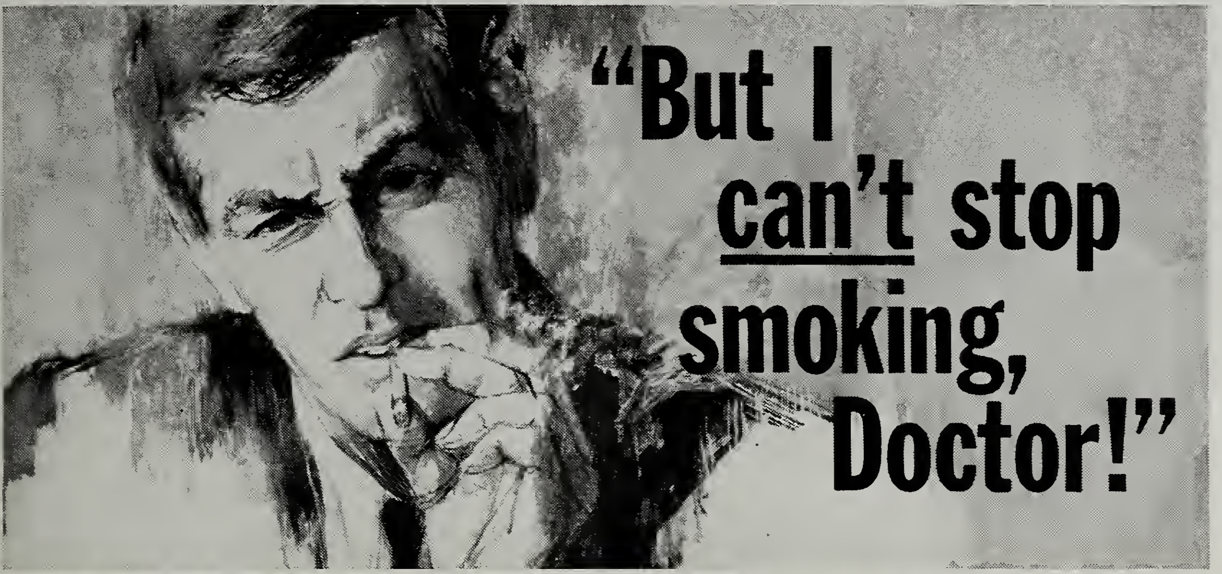
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Hemochromatosis, Holbrooke S. Seltzer, M.D., Dallas, Tex.
Sponsored by the Missouri Diabetes Society.
Current Problems in Hepatitis, Hyman J. Zimmerman, M.D., Chicago.

Surgical Session, Khorassan Room.
Paul F. Max, M.D., St. Louis, presiding.

2:00 p.m. Regional Enteritis—Surgical Aspects, B. Marden Black, M.D., Rochester, Minn.
Sponsored by the Missouri Surgical Society.

2:30 p.m. The Chiari Frommel Syndrome (Medroxyprogesterone Acetate Therapy), Arthur L. Haskins, M.D., Baltimore, Md.
Sponsored by the St. Louis Gynecologic Society.

3:00 p.m. Care of the Child With Multiple Injuries, John C. Wilson Jr., Los Angeles.

3:30 p.m. Intermission to View Exhibits.

4:00 p.m. House of Delegates.

5:30 p.m. Reference Committee meetings.

6:30 p.m. St. Louis Gynecologic Society dinner meeting, St. Louis Medical Society Bldg.

6:30 p.m. Missouri Surgical Society dinner meeting, University Club.

6:30 p.m. Missouri Ophthalmological Society dinner meeting, Lido Room.

6:30 p.m. Missouri Radiological Society dinner meeting, Coach Room.

6:30 p.m. Missouri Society of Internal Medicine, Stockholm Room.

Tuesday, March 10, 1964

8:00 a.m. Registration. Lobby floor.

9:00 a.m. Panel: Hits and Misses in Current Drug Therapy, Khorassan Room.
Moderator: Edward D. Kinsella, M.D., St. Louis.
Cancer Chemotherapy, C. Gordon Zubrod, M.D., Bethesda, Md.
The Use of Thyroid, Thyroxine and Triido-thyronine in the Treatment of Hypothyroidism and Other Conditions, Paul H. Lavietes, M.D., New Haven, Conn.
MAO Inhibitors, Their Use, Misuse and Therapeutic Effects, Nathan S. Kline, M.D., Orangeburg, N. Y.

9:00 a.m. Panel: Adolescent Medicine, Lido Room.
Moderator, James P. King, M.D.
Panelists:
    Felix P. Heald Jr., M.D., Washington, D. C.
    Willard M. Allen, M.D., St. Louis.
    Robert J. Corday, M.D., St. Louis.

10:30 a.m. Intermission to View Exhibits.

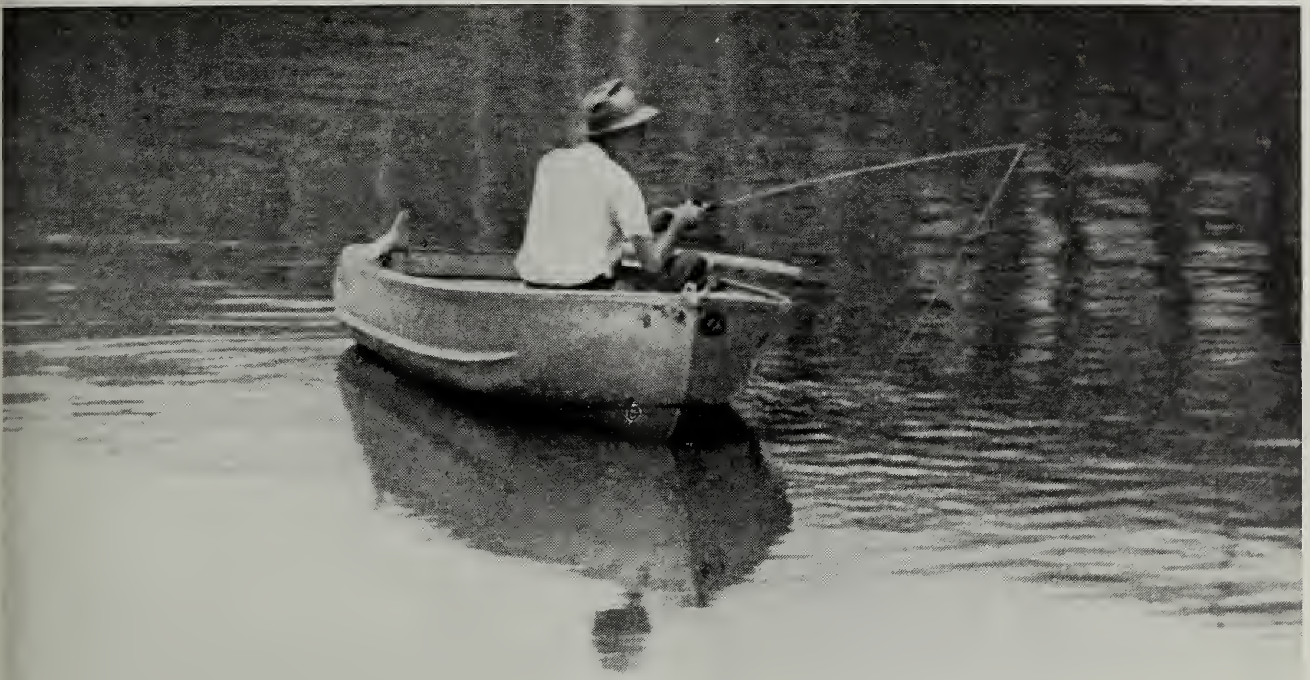
Carl R. Ferris, M.D., Kansas City, presiding.

11:00 a.m. Subject to be announced, M. D. Overholser, M.D., Columbia.
Missouri University Medical Award Winner.

11:30 a.m. Polyglandular Disease, Edwin H. Ellison, M.D., Milwaukee, Wis.

12:00 noon University of Missouri Medical Alumni Association Luncheon, Zodiac Room.

1:30 p.m. Medical Economics Session, Khorassan Room.
The Problem of Hospital Costs.
Moderator: Curtis H. Lohr, M.D., St. Louis.
Panelists:
    Mr. Harry M. Piper, St. Louis, Administrator of St. Luke's Hospital.
    Mr. John B. Warner Jr., St. Louis, Director of St. Louis University Hospitals.



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The family physician must often assume responsibility for the discharged mental patient. Thorazine (chlorpromazine, SK&F) can be a valuable adjunct to the continuing care of this patient, because it helps prevent relapses by insulating him from the impact of stressful experiences. For successful rehabilitation and prevention of rehospitalization, however, the former mental patient—and often his family—also needs the guidance and counsel of his physician.

Many physicians are surprised by the high doses of Thorazine (chlorpromazine, SK&F) used in patients released to their care from mental hospitals. This surprise may be expressed by a drastic reduction in dosage "to play it safe"—with serious consequences for the patient.

The successful maintenance of former mental patients requires adequate, often "high" dosage, and often for prolonged periods of time. Fortunately, these dosages do not mean greater risks for the patient. On the contrary, there is much less risk of serious side effects once a patient has become gradually accustomed to Thorazine (chlorpromazine, SK&F)—*regardless of dosage*—over a period of a few months. Continuing therapy is almost always well tolerated, and is essential to most patients' continued well-being.

Brief Summary: Thorazine (chlorpromazine, SK&F) has been successfully used for 10 years in the treatment of mental and emotional disturbances, and has proven highly effective in the maintenance therapy of former hospitalized mental patients. *Principal side effects:* The most frequently encountered side effect is transitory drowsiness. Other occasional side effects include: dry mouth, nasal congestion, constipation, miosis, dermatological reactions, photosensitivity, jaundice, hypotension, increased appetite and weight; very rarely, mydriasis, agranulocytosis, extrapyramidal symptoms. *Contraindications:* Comatose states or in the presence of excessive amounts of C.N.S. depressants.

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Charles A. Nester, M.D., St. Louis.

3:00 p.m. Intermission to View Exhibits.

3:30 p.m. Panel: Treatment of Hiatus Hernia and Esophagitis, Lido Room.
Moderator: Hector W. Benoit Jr., M.D., Kansas City.
Panelists:
Donald B. Effler, M.D., Cleveland, Ohio.
Nicholas C. Hightower, M.D., Temple, Tex.
Richard Schatzki, M.D., Boston, Mass.

3:30 p.m. Panel: Long Term Management of Ischemic Heart Disease, Khorassan Room.
Moderator: Guy D. Callaway Jr., M.D., Springfield.
Coronary Arteriography: Clinical and Psychological Correlations, Richard S. Ross, M.D., Baltimore, Md.
Impending Myocardial Infarction, R. E. Beamish, M.D., Winnipeg, Canada.
Prophylactic Anticoagulent Therapy After Myocardial Infarction, Herbert E. Griswold Jr., M.D., Portland, Oregon.
Sponsored by the Missouri Heart Association.

5:45 to 7:15 p.m. St. Louis University Medical Alumni Reception, Stockholm Room.

6:00 to 7:15 p.m. Washington University Medical Alumni Reception, Coach Room.

7:30 p.m. Banquet in Honor of Past Presidents, Khorassan Room.

Wednesday, March 11, 1964

7:30 a.m. House of Delegates Breakfast Meeting, Chase Club.

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Your patient's ECG is recorded automatically for 10 seconds at either pre-set intervals or at the onset of any of four distress conditions. It can also be taken *during pacing*, for valuable knowledge of the patient's response to pacing. *Heart rate* is continuously displayed on the front panel meter, which has adjustable upper and lower thresholds to activate alarms. *Bradycardia, tachycardia, peripheral pulse loss, arrest* and each *QRS complex*, as well as operating conditions of the Viso-Monitor, are shown by warning lights. *Internal or external pacemaking current* is provided by the instrument, with adjustments for current and rate and positive safeguards to prevent accidental pacing. *Audible alarm* is supplied by an optional Remote Alarm unit, which also duplicates visual indicators and heart rate meter of main instrument. The new Model 780 Viso-Monitor is $1850, the Remote Alarm unit $250, and DC Defibrillator $1370 (F.O.B. Waltham, Mass., continental U.S.A.).

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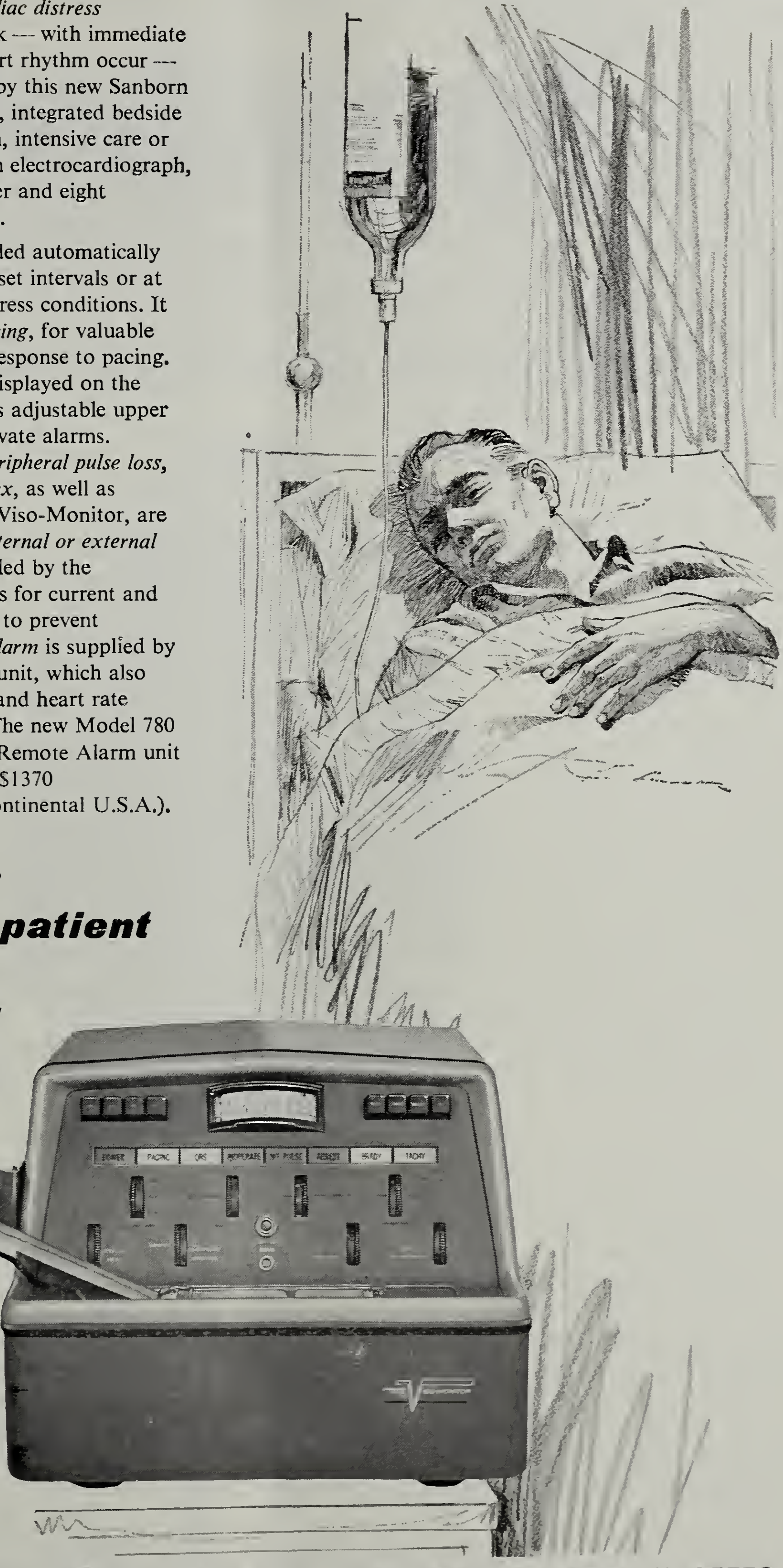

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8621 East 55th St., Fleming 3-2038

New Members

Tanous D. Faris, M.D., 8852 Flamingo Court, St. Louis, has become a member of St. Louis Medical Society. Dr. Faris is a native of Providence, R. I., received his preliminary education at Providence College, and his M.D. degree at Tufts University in 1959. He specializes in surgery.

Thomas F. Frawley, M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Frawley is a native of Rochester, N. Y., received his preliminary education at the University of Rochester, and his M.D. at the University of Buffalo in 1944. He specializes in internal medicine.

Paul L. Friedman, M.D., 7712 Cornell Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Friedman is a native of St. Louis, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1957. He specializes in anesthesiology.

William B. Hardin Jr., M.D., 660 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Hardin is a native of Houston, Tex., received his preliminary education at Rice University, and his M.D. degree at the University of Texas in 1957. He specializes in neurology.

Robert S. Hicks, M.D., 4500 W. Pine Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Hicks is a native of Eldorado, Ark., received his preliminary education at Hendrix College, and his M.D. degree at the University of Arkansas in 1958. He specializes in psychiatry.

Lanny L. Johnson, M.D., 2001 Lindbergh Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Johnson is a native of Wayne, Mich., received his preliminary education at Michigan State University, and his M.D. degree at Wayne State University in 1959. He specializes in orthopedics.

James H. Jones, M.D., 2323 37th St., N.W., Washington, D. C., has become a member of St. Louis Medical Society. Dr. Jones is a native of St. Louis, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1959. He specializes in ophthalmology.

George C. Kaiser, M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Kaiser is a native of Bronx, N. Y., received his preliminary education at Lehigh University, and his M.D. degree at John Hopkins University in 1953. He specializes in surgery.

Lucy J. King, M.D., 4940 Audubon St., St. Louis, has become a member of St. Louis Medical Society. Dr. King is a native of Vandalia, Illinois, received her preliminary education at Washington University, and her M.D. degree at Washington University in 1958. She specializes in psychiatry.

Robert P. Kloecker, M.D., 9616 Lackland Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Kloecker is a native of St. Louis, received his preliminary education at Notre Dame University, and his M.D. degree at St. Louis University in 1959. He specializes in obstetrics.

Daniel K. Lane, M.D., 3720 Washington Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Lane is a native of St. Louis, received his preliminary education at Princeton University, and his M.D. degree at Washington University in 1959. He specializes in dermatology.

John D. Lauer, M.D., 3720 Washington Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Lauer is a native of Alton, Ill., received his preliminary education at John Carroll University, and his M.D. degree at St. Louis University in 1956. He specializes in radiology.

Manuel F. Menendez, M.D., 11084 Eckelkamp Drive, St. Louis, has become a member of St. Louis Medical Society. Dr. Menendez is a native of Havana, Cuba, received his preliminary education at Marti Academy and his M.D. degree at Havana Medical School in 1956. He specializes in pathology. (Dr. Menendez was incorrectly listed as Amando Menendez in the January issue.)

Alva Moore, M.D., 2814 N. Taylor Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Moore is a native of Monroe, Ark., received his preliminary education at Philander Smith College, and his M.D. degree at Meharry College in 1937. He specializes in internal medicine.

Ferris N. Pitts, M.D., 4940 Audubon St., St. Louis, has become a member of St. Louis Medical Society. Dr. Pitts is a native of St. Louis, received his preliminary education at Washington

Special cough formula for children

Pediacof®

Each teaspoon (5 ml.) contains codeine phosphate 5 mg.,
Neo-Synephrine® hydrochloride (brand of phenylephrine hydrochloride) 2.5 mg.,
chlorpheniramine maleate 0.75 mg. and potassium iodide 75 mg.

soothing decongestant and expectorant

bright red, pleasant-tasting, raspberry-flavored syrup

Pediacof is different. It is designed especially for children, and each ingredient is in the right proportion. The potassium iodide in Pediacof is so well masked that it is virtually unnoticeable. Children like the sweet raspberry flavor of bright red Pediacof.

Dosage: Children from 6 months to 1 year, ¼ teaspoon; from 1 to 3 years, ½ to 1 teaspoon; from 3 to 6 years, 1 to 2 teaspoons; and from 6 to 12 years, 2 teaspoons. These doses are to be given every four to six hours as needed.

How supplied: Bottles of 16 fl. oz.

Available on prescription only.
Exempt Narcotic.

Side effects: The only significant untoward effects that have occurred are mild anorexia and an occasional tendency to constipation. However, discontinuance of Pediacof has seldom been required. Mild drowsiness occurs in some patients but, when cough is relieved, the quieting effect of Pediacof is considered beneficial in many instances.

Precautions and contraindications: Patients with tuberculosis or those who are known to be sensitive to iodides should not be given Pediacof.

Caution should be exercised if Pediacof is administered to patients with cardiac disorders, hypertension or hyperthyroidism.

Warning: May be habit forming.

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Winthrop

University, and his M.D. degree at Washington University in 1955. He specializes in psychiatry and pediatrics.

Thomas E. Rusan, M.D., 243 E. Kirkham Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Rusan is a native of St. Louis, received his preliminary education at the University of Illinois, and his M.D. degree at Meharry College in 1945. He specializes in general practice and obstetrics and gynecology.

Donald G. Spalding, M.D., 7715 Weston Place, St. Louis, has become a member of St. Louis Medical Society. Dr. Spalding is a native of Granite City, Ill., received his preliminary education at Central College, and his M.D. degree at St. Louis University in 1960. He specializes in radiology.

Andrew D. Spencer, M.D., 2601 N. Whittier St., St. Louis, has become a member of St. Louis Medical Society. Dr. Spencer is a native of East Chicago, Ind., received his preliminary education at Indiana University, and his M.D. degree at Indiana University in 1954. He specializes in surgery.

Mark A. Stewart, M.D., 4950 Audubon St., St. Louis, has become a member of St. Louis Medical Society. Dr. Stewart is a native of Yeovil, England, received his preliminary education at Cambridge University, and his M.D. degree at the University of London and St. Thomas Hospital Medical School in 1956. He specializes in psychiatry.

C. M. Turner, M.D., 3861 St. Louis Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Turner is a native of Muskogee, Okla., and received his M.D. degree at Meharry Medical College in 1947. He specializes in obstetrics and gynecology.

Joe R. Utley, M.D., Whiteman Air Force Base, has become a member of St. Louis Medical Society. Dr. Utley is a native of Carter, Okla., received his preliminary education at Oklahoma City University, and his M.D. degree at Washington University in 1960. He specializes in surgery.

CHELATION — (GR-CHELE: CLAW OR TO HOLO.)

The FIRST Hematinic to Contain BOTH CHELATED IRON and CHELATED MINERALS Assuring a Truly Flavorful, Better Tolerated Iron Therapy.

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Chelated Iron PLUS 4 Chelated Minerals • High Therapeutic Effectiveness • Less Irritation — even on empty stomach • No Tooth Stain • Less Toxic • B-Vitamins for Added Hemopoietic Activity • Pleasant Flavor • Economical

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CHELATED IRON-MINERALS and VITAMINS

FORMULA —
Each 5 cc. (one teaspoonful) contains:

Iron (as Ferrous Betaine Citrate)	30 mg.
Cobalt (as Cobaltous Betaine Citrate)	0.1 mg.
Manganese (as Manganese Betaine Citrate)	1.0 mg.
Zinc (as Zinc Betaine Citrate)	1.25 mg.
Magnesium (as Magnesium Betaine Citrate)	6.0 mg.
Vitamin B-1	1.5 mg.
Vitamin B-2	1.2 mg.
Vitamin B-12	6.0 mcg.
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Panthenol	10 mg.

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ain *is almost invariably a presenting symptom in cases of skeletal muscle* spasm

In some instances, the pain subsides on relaxation of the muscles in spasm. In others, relaxant therapy alone fails to give adequate relief, and supplementary analgesia (and possibly sedation) are indispensable, as in cases of:

provocative pain, when muscle spasm is triggered by some painful underlying musculoskeletal defect.

residual pain, when relaxation of severe spasticity leaves a degree of myalgia that tends to reinvoke spasm.

severe pain, when the degree of pain is such as to cause persistence of symptoms in spite of relaxant therapy.

emotionally aggravated pain, when anxiety or agitation creates tension that thwarts the efficacy of both relaxant and analgesic medication.

In such cases, ROBAXISAL and ROBAXISAL-PH have proven highly effective in assuring decisive and comprehensive relief. The ROBAXISAL formula—of ROBAXIN (methocarbamol), the potent muscle relaxant, together with aspirin, the time-tested and proved analgesic—produces higher plasma salicylate levels than equivalent doses of aspirin alone, and serves effectively to control both spasm and pain. ROBAXISAL-PH's combination of ROBAXIN (methocarbamol) with the analgesic-sedative ingredients of the PHENAPHEN formula—including phenobarbital—helps additionally to ease apprehension.

ROBAXISAL® Robins

Each pink-and-white laminated Tablet contains:

ROBAXIN (methocarbamol, Robins)	400 mg.
Aspirin (5 gr.)	325 mg.

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ROBAXISAL®-PH

Each green-and-white laminated Tablet contains:

ROBAXIN (methocarbamol, Robins)	400 mg.
Phenacetin (1½ gr.)	97 mg.
Aspirin (1¼ gr.)	81 mg.
Hyoscyamine sulfate	0.016 mg.
Phenobarbital (⅛ gr.)	8.1 mg.

(Warning: May be habit forming)

"PAIN & SPASM" – a two-headed dragon!

ROBAXISAL and ROBAXISAL-PH are indicated in strains and sprains, painful disorders of the back, "whiplash" injury, myositis, pain and spasm associated with arthritis, torticollis, and headache associated with muscular tension.

Side effects such as lightheadedness, slight drowsiness, dizziness and nausea may occur rarely in patients with intolerance to drugs, but they usually disappear on reduction of dosage.

Contraindicated for patients hypersensitive to any component of the formulations. There are no specific contraindications to methocarbamol, and untoward reactions are not to be expected.

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County Society News

FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

Buchanan County Medical Society

The election meeting of the Buchanan County Medical Society was held in Hotel Robidoux, St. Joseph, following a dinner on December 4. Officers chosen to serve the Society in the coming year were: Dr. Herbert C. Senne, President-Elect; Dr. William Redmond, Vice President; Dr. Irwin Rosenthal, Secretary; Dr. Robert W. Kieber, Treasurer for the 11th consecutive year.

Dr. Jacob Kulowski was elected to the board of censors, and Dr. Ernest E. Wadlow was reelected delegate to the State Medical Association. Alternate delegates selected were: Drs. E. F. Butler and Thompson E. Potter. Other officers chosen were: Dr. Caryl A. Potter Jr., member committee on public policy; Dr. George W. Forman, trustee to 1969; Dr. John R. McDaniel, member of the executive committee.

The newly elected officers will be installed at the annual dinner and installation meeting of the Society for doctors and wives on December 12 at Hotel Robidoux. Dr. William B. Rost, President-Elect during 1963 will assume the presidency at the meeting. Dr. John R. McDaniel, retiring president, will preside at the meeting and serve as installing officer.

Arrangements for the installation dinner and meeting were made by the program committee of which Dr. F. Gregg Thompson III, is chairman, serving with Drs. Manson B. Pettit and Edmund W. Kline.

William Redmond, M.D., *Secretary*

Grand River Medical Society

The annual Christmas meeting of the Grand River Medical Society and its Woman's Auxiliary was held at the Strand Hotel in Chillicothe on Thursday night, December 12. The meeting room was suitably decorated for the occasion by members of the Auxiliary and the spirit of Christmas encompassed the entire evening's festivities. A social hour of true Christmas fellowship initiated the evening's program with more than 60 doctors, wives and guests participating. The dinner following the social hour was of top Christmas variety. The formal program for the evening was highlighted by a short talk by Dr. Kenneth Hollweg of Kansas City, President of the Missouri State Medical Association.

President Hollweg gave a most interesting résumé of a number of meetings which he had attended this year as President of the State Association and explained a few projects of special interest to his audience. Ray McIntyre, Field Secretary of the State Medical Association, spoke briefly concerning the status and needs of the Missouri State Medical Foundation.

Dr. Vandiver, Mrs. Hollweg, Dr. Gary, Mrs. Vandiver, President Hollweg and Mrs. Gary were seated at the head table.

Special music for the occasion was furnished by the son of Dr. and Mrs. Gearhart of Bethany who plays the harp exceedingly well.

President George Gary of Marceline conducted the meeting in top fashion and it was difficult to determine whether it was with pleasure or regret that he turned over the gavel to the incoming President, Dr. James Sweiger of Maysville at the close of the meeting. Members of the society

Dr. Gary turned over the gavel to the incoming president, Dr. Sweiger.

some may need the combined formula

ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg.
Acetophenetidin (Phenacetin)	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms, tooth discoloration. The last named may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Average Adult Dosage: 2 Tablets four times daily.

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The audience included the immediate Past President, Dr. Dowell.

and their wives were honored to have Dr. and Mrs. Hollweg as special guests for the occasion and hope they will return soon. A number of pharmaceutical representatives of the area were present as guests to participate in the entire evening festivities.

Jack L. Vinyard, M.D., *Secretary*

SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

Lafayette-Ray County Medical Society

The Lafayette-Ray County Medical Society held its December meeting at the Sheraton Elms Hotel in Excelsior Springs. Christmas spirit rang high and was not dampened by cold weather, snow and ice. After an enjoyable meal, excellent entertainment was provided and apparently met with approval by all present. All arrangements and preparations were made by the Lafayette-Ray County Medical Society Auxiliary.

A short business meeting was held at which time officers were elected for the coming year. Results of the election are as follows: President, Wilbur Fulkerson, M.D., Higginsville; President-Elect, Wayne Boydston, M.D., Odessa; Secretary-Treasurer, William La Hue, M.D., Lexington; Delegate, Lafayette County, Joe Ward, M.D.; Alternate, William La Hue, M.D.; Delegate, Ray County, George DeVault, M.D.; Alternate, Isadore Goldberg, M.D.

Wayne Boydston, M.D., *Secretary*

West Central Missouri Medical Society

The regular monthly meeting of the West Central Missouri Medical Society was held in Butler, December 12, at Glenn's Cafe. The usual social hour with visitation of members, wives and guests opened at 6:30 p.m. and was followed by a nice steak dinner.

Following the meal President-Elect, Carter W. Luter, took charge of the meeting in the absence of President Edward Jones who was unable to attend due to a death in the family.

The scientific program for the evening was furnished by the Committee on Maternal Welfare of the Missouri State Association.

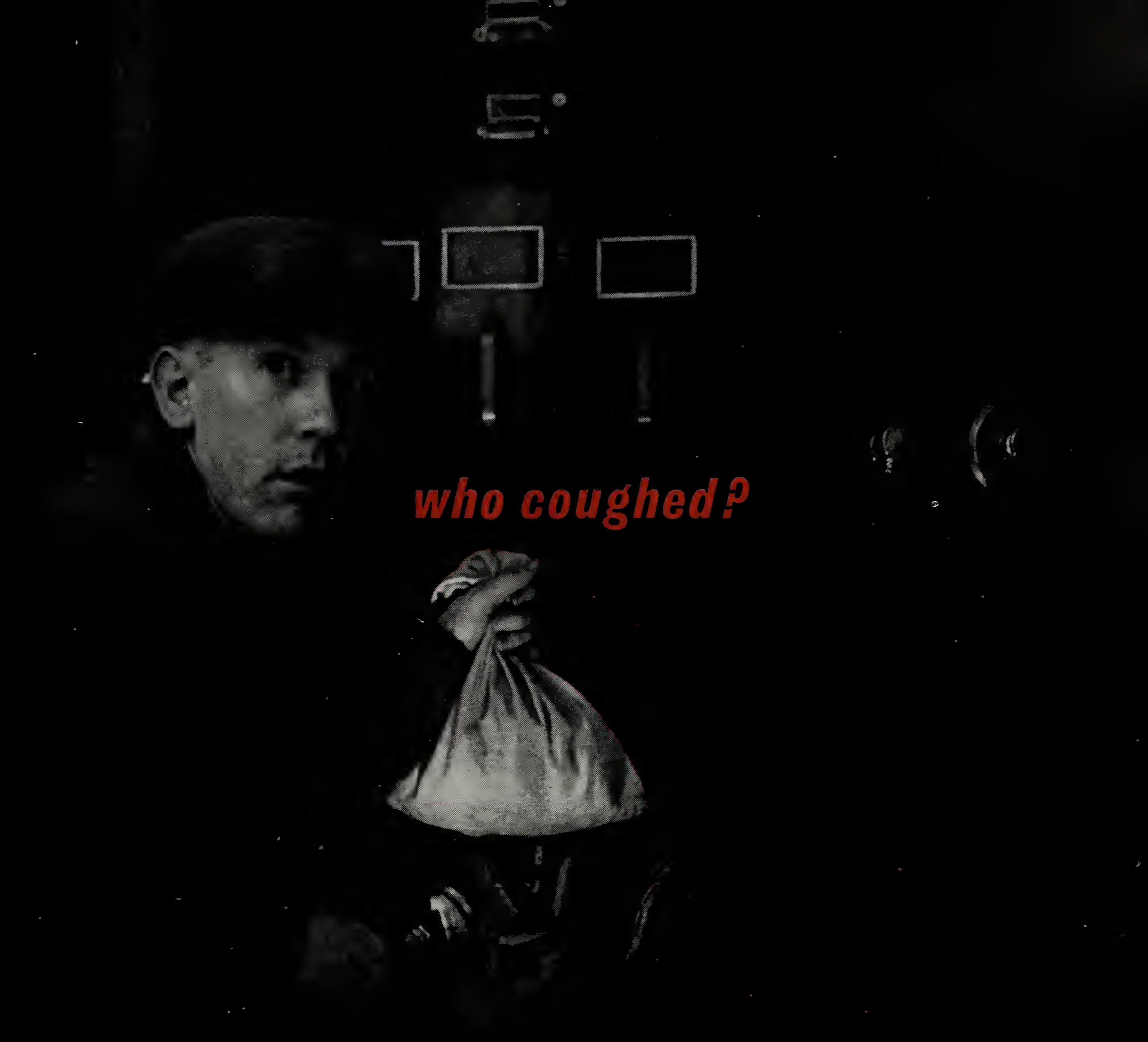
The panel discussion was on the subject, "Major Causes of Maternal Mortality With Special Reference to Western Missouri." The physicians making up the panel were from the obstetrical service at St. Luke's Hospital in Kansas City, made up of Dr. Leonard A. Wall, Robert A. Slickman and Thomas J. Fritzlen. A case was presented in which a maternal death occurred—the history and physical and management of the case were explained in detail. The panel discussed the pros and the cons of the case and the management, and then asked for open discussion. These are always interesting presentations and we were pleased to have these men bring such a fine program. The discussions are never held in the spirit of criticism as they explained, but to bring out suggestions of a constructive nature to help all should we be faced with a similar situation.

The president bypassed the reading of the minutes of the previous meeting and went ahead with some business at hand. The Society voted $100.00 to the MSMA Student Loan Fund. The delegates and alternates for the coming 1964 meeting of the MSMA in St. Louis were elected as follows: Cass County, Edward S. Jones, Harrisonville, Delegate; A. W. Ecklund, Pleasant Hill, Alternate. Bates County, A. L. Hansen, Butler, Delegate; C. W. Luter, Butler, Alternate. Vernon County, Rolla Wray, Nevada, Delegate; Roy Pearse, Nevada, Alternate. Cedar County, Robert Magee, Eldorado Springs, Delegate; William B. Richter, Stockton, Alternate. St. Clair, Don Giesler, Osceola, Delegate; Robert Brownsberger, Appleton City, Alternate.

The president-elect will have his committees appointed in early January. It was stressed that the delegates make every effort to be present from the opening until the close of the session in St. Louis, and if not able to attend, to be sure and have their alternate designated and properly endorsed.

There being no further business, the meeting adjourned until the January meeting in Harrisonville.

Carter W. Luter, M.D., *Secretary*


who coughed?

for fast and long-lasting cough control

HYCOMINE SYRUP

Each teaspoonful (5 cc.) contains:

Hycodan®		
Hydrocodone bitartrate . . . 5 mg. (Warning: May be habit-forming)		6.5 mg.
Homatropine methylbromide 1.5 mg.		
Pyrilamine maleate	12.5 mg.	
Phenylephrine hydrochloride	10 mg.	
Ammonium chloride	60 mg.	
Sodium citrate	85 mg.	

in a highly palatable, cherry-flavored vehicle (methylparaben 0.13% and propylparaben 0.02% as preservatives)

INDICATIONS: For both productive and nonproductive cough. For relief of symptoms in tracheitis, bronchitis, pneumonia, pharyngitis, bronchial asthma, pertussis, and allied conditions; cough associated with allergy; in general, whenever cough medication is indicated.

DOSAGE: Average adult dose—1 teaspoonful after meals and at bedtime with food. Children 6 to 12 years, ½ teaspoonful; 3 to 6 years, ¼ teaspoonful; 1 to 3 years, 10 drops; 6 months to 1 year, 5 drops; after meals and at bedtime. On oral Rx where state laws permit. U.S. Pat. 2,630,400.

CAUTION: Should be used with caution in patients with known idiosyncrasies to phenylephrine HCl and in patients with moderate or severe hypertension, hyperthyroidism or advanced arteriosclerosis. In these patients use should not exceed three days. Hycomine Syrup is generally well tolerated but in some patients drowsiness, dizziness or nausea may occur. May be habit-forming.

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Literature on request

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The Council

The Council met at Hotel Chase-Park Plaza, St. Louis, December 7, 8, 1963, with Byron M. Stuart, M.D., Boonville, Chairman, presiding. Those present were Drs. Stuart; James M. Macnish, St. Louis; Paul R. Whitener, St. Louis; O. B. Barger, Harrisonville; H. W. Benoit Jr., Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Kenneth C. Hollweg, Kansas City; Leonard T. Furlow, St. Louis; J. I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; H. M. Hardwicke, Jefferson City; Vernon E. Wilson, Columbia; Messrs. Allen D. Smith, Kansas City; Hollister Smith, St. Louis; Edgar Mothershead, St. Louis; Gary Schnedler, Springfield; Frank Woolley, Chicago; Lemoine Skinner, Jordan Singleton, Thomas P. Fox, Ray McIntyre, T. R. O'Brien, St. Louis; Misses Peggy Heileg and Helen Penn, St. Louis. Attending a portion of the meeting were Drs. J. V. Finnegan, St. Louis; James A. Kinder, Cape Girardeau; William D. Perry, St. Louis; Carl D. Siegel, Sedalia; James N. Haddock, Webster Groves; Byron E. Watts and Frederick O. Tietjen, Jefferson City; Mr. James Foristel, Washington, D. C.

UNITED FUND

Mr. O'Brien announced that the Association had received a plaque from the United Fund, all persons in the office contributing and a larger amount than last year being given.

MR. SMITH

Dr. Benoit introduced Mr. Allen D. Smith, in charge of communications for the Jackson County Medical Society.

BLOOD BANKS

Dr. Benoit discussed the blood bank situation in Kansas City and presented H.R. 8426 which had been introduced into the Congress. The bill reads: "Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall not be deemed to be an act in restraint of trade under any law of the United States for any nonprofit blood bank or physician to refuse, or to join together with any other person or persons in refusing, to obtain from or to accept delivery of human blood or human blood plasma from any other blood bank."

The following resolution which was introduced at the AMA session by Dr. Richard H. Kiene, delegate, and appproved by the reference committee and the House of Delegates of the AMA was presented:

> WHEREAS, House Resolution No. 8426 of the 88th Congress of the United States would provide that a refusal of non-profit blood banks and of physicians to obtain blood and blood plasma from other blood banks shall not be deemed to be acts in restraint of trade under the laws of the United States; and
>
> WHEREAS, Non-profit blood banks by procuring blood and blood plasma from volunteer donors and scientifically processing such materials for human use, provide an essential part of medical care in the United States; and
>
> WHEREAS, Physicians who are skilled in clinical pathology and hematology voluntarily and without compensation work in and direct the technical operation of such non-profit blood banks; and
>
> WHEREAS, These physicians are usually members of their county, state and national medical associations and their respective specialty societies; therefore be it
>
> *Resolved,* By the House of Delegates of the American Medical Association that it favors enactment of legislation by the Congress of the United States, for the intent and purpose for which House Resolution 8426 provides and; be it further
>
> *Resolved,* That copies of this resolution be sent by the proper offices of the American Medical Association to all members of the House of Representatives and of the Senate of the 88th Congress of these United States and; be it further
>
> *Resolved,* That a representative of the American Medical Association appear before any committee of the House of Representatives or Senate to which this resolution or a similar resolution may be referred, and to urge its enactment by the Congress of the United States with the recommendation that "hospitals" be included with "non-profit blood banks and physicians."

FIELD SECRETARY'S REPORT

Mr. McIntyre reported on the following meetings which had been held since the last Council meeting: September 30, Greene County and 8th Councilor District, showing "Operation Barnstormer"; the same program at Jackson County Medical Society on Sept. 24; the Kansas City Southwest Clinical Society; October 6, Maternal Welfare Committee meeting; October 7, Cape Girardeau County Medical Society with Dr. Hollweg as speaker; October 10 and 11, Physicians and Schools conference in Chicago which was attended also by Dr. Guy N. Magness; October 16, a meeting at Clinton with Dr. Hollweg as speaker; October 26, 27, Missouri Academy of General Practice in Kansas City, with Dr. McCraw being elected president-elect; November 6, Public Service Committee; November 11, trip to Perryville to discuss the hyphenation of Ste. Genevieve County with the Perry County Medical Society; November 15, West Central Medical Society with Dr. Hollweg as speaker; November 19, Marion-Ralls-Shelby, at which it was brought out that drugs could not be handled by druggists for the amount that is paid by the state for OASI individuals; November 21, Perry County Medical Society, at which was discussed a proposed hyphenation of the Perry County Medical Society with Ste. Genevieve County (now in Mineral Area Society).

HYPHENATION

After discussion, in which it was stated that the hyphenation of Perry County and Ste. Genevieve was approved by the Mineral Area and Perry County Societies and by doctors in Ste. Genevieve County, on motion of Dr. English, duly seconded, it was voted that the hyphenation be approved and that a new charter be given to the Perry-Ste. Genevieve County Medical Society.

TREASURER'S REPORT

Dr. Doyle presented the report of the Treasurer, which on motion of Dr. Doyle, duly seconded, was filed for audit.

BUDGET

Dr. Doyle presented the following 1964 budget, which on motion of Dr. Doyle, duly seconded, was adopted:

Salaries	$ 70,525.00
Office rent and light	4,700.00
Postage	5,000.00
Stationery, printing, supplies	5,000.00
JOURNAL expense	35,000.00
Telephone and Telegraph	3,000.00
Insurance, Emp. pension plan	8,000.00
Legal and professional fees	3,500.00
Taxes—payroll	2,200.00
Travel expense	7,000.00
Committee expense	51,000.00

Post-Graduate Program

"THE PHYSIOLOGICAL BASIS FOR DIAGNOSIS AND TREATMENT OF DISEASE"

Co-Sponsors
Department of Internal Medicine
St. Louis University School of Medicine
and
Missouri State Medical Association

St. Louis University Hospitals
Firmin Desloge Hospital
Miller Hall

Wednesday, March 11, 1964

Morning Session—Goronwy O. Broun Sr., M.D., Dean, St. Louis University School of Medicine—Presiding.

10:00 New Concepts of Parathyroid Function in Clinical Disease
Thomas F. Frawley, M.D., Professor of Medicine; Director, Department of Internal Medicine

10:30 The Basis of Therapy of Diabetes Mellitus
Henry E. Oppenheimer, M.D., Associate Professor of Clinical Medicine

11:00 Recent Trends in the Study of Iron Metabolism
Neil I. Gallagher, M.D., Assistant Professor of Medicine

11:30 Newer Concepts of the Disorders of Iron Metabolism
Goronwy O. Broun Jr., M.D., Assistant Professor of Medicine

12:00 General Discussion

12:30 Lunch—Firmin Desloge Hospital Cafeteria

Afternoon Session—Ralph A. Kinsella Sr., M.D., Professor Emeritus, Department of Internal Medicine—Presiding.

1:30 Pathophysiology and Therapy in Chronic Pulmonary Insufficiency
Herbert C. Sweet, M.D., Professor of Clinical Medicine

2:00 Evaluation of the Hypertensive Patient
James G. Janney Jr., M.D., Associate Professor of Clinical Medicine

2:30 Antibiotics and Host Response in the Management of Infectious Disease
R. William Burmeister, M.D., Instructor in Internal Medicine

3:00 The Malabsorption Syndrome
Guy E. Van Goidsenhoven, M.D., Assistant Professor of Medicine

3:30 General Discussion

Registration Fee—$10.00, includes lunch

Send Inquiries to: W. A. Knight Jr., M.D.
Department of Internal Medicine
St. Louis University School of Medicine
1325 South Grand Blvd.
St. Louis 4, Missouri

Furniture and Fixtures	500.00
General expense	3,000.00
MSMF assessment	25,526.00
MSMF expense	600.00
Total	$224,851.00

PUBLIC SERVICE

Dr. Barger gave the report of the Committee on Public Service as follows:

The Committee on Public Service met on November 6, at the Chase Hotel, St. Louis, with Dr. O. B. Barger, Harrisonville, presiding. Others present were: Drs. Kenneth C. Hollweg, Kansas City; Leonard T. Furlow, St. Louis; Armand Brodeur, St. Louis; H. M. Hardwicke, Jefferson City; Messrs. Tom O'Brien, Ray McIntyre, Tom Fox, Lemoine Skinner Jr., Jordan C. Singleton and Miss Peggy Heilig, St. Louis.

King-Anderson Hearings—The Ways and Means Committee of the House of Representatives will hold hearings on the King-Anderson Bill November 18-27.

MSMA Statement of Opposition—A statement of opposition from MSMA has been prepared and this was reviewed and approved by the Committee. The statement includes excerpts from the Cason interim committee report on health needs of the aged in Missouri, a review of the health care legislation passed by the 1963 session of the Missouri General Assembly and concludes with statistics gathered by the Missouri Division of Health concerning the method of payment by patients discharged from outstate Missouri hospitals in the last six months of 1962. These statistics show that of a total of 90,192 cases, only 929 could not pay any of their hospitals costs, and of these 929, just 186 were aged 65 or over. The committee suggested that when the statement is forwarded to the Ways and Means Committee, copies be sent to all members of Congress from Missouri, the presidents and secretaries of county societies and the legislative bulletin mailing list. A state-wide news story should also be released at this time, and the statement should be printed, in full, in Missouri Medicine.

Notices Regarding Hearings—Mr. O'Brien reported that a letter was sent on November 6 to all executive secretaries and presidents of county societies and "Operation Hometown" county chairmen announcing the dates of the King-Anderson hearings, and asking that local physicians write and personally contact their Congressmen concerning the King-Anderson bill.

The Public Service Committee recommends that all county societies and auxiliaries be enlisted in the letter-writing effort to the members of the Ways and Means Committee, as well as to their own representatives, at the time of the hearings.

Public Health—Dr. Hardwicke, Acting Director of the Missouri Division of Health, met with the Committee for the first part of the meeting. He suggested that Public Health has a newly evolving role to play in today's doctor-patient relationship and set forth several ways in which the Division of Health could be helpful in increasing the physician's effectiveness. These were: (1) training public health nurses for assignment as home nursing aids in support of the practicing physicians; and (2) making available the services of psychiatrists to interested doctors for consultation and instructive purposes in cases of patients with emotional and psychoneurotic problems. Dr. Hardwicke's suggestions will be referred to the Council for consideration.

Mobilization for 1964—The Committee recognized and discussed the crucial importance of the outcome of the 1964 elections to the future of the medical profession, and recommends increased activitiy by county societies and individual members in this area.

"Operation Hometown"—Only six of 51 societies have reported "Operation Hometown" chairmen. The committee expressed disappointment in this showing and recommends that societies which have not yet gotten this project under way be urged to do so immediately, by mail and by visits of the Field Secretary.

MMPAC—1963 membership in the Missouri Medical Political Action Committee is 280, compared to 375 in 1962. The Committee feels that personal solicitation for memberships will be required in 1964 for greatest effectiveness of this important organization.

"Barnstormer"—The "Barnstormer" film on political action has been shown in Kansas City and Springfield under MMPAC auspices and showings have been requested for Joplin and the Grand River Society. It was reported that arrangements are also being made for a joint showing for the St. Louis and St. Louis County Societies.

Quackery—After discussion, the Committee passed a resolution urging that the State Board of Medical Examiners secure personnel needed to thoroughly investigate all forms of quackery in Missouri, and pledging the full cooperation of the Committee in publicizing the facts uncovered by such investigations.

Medicine and Religion—An Association Committee on Medicine and Religion has been formed, and the Public Service Committee offers its assistance with publicity, as needed, for the meetings and activities of this new committee.

Communications—The Public Service Committee offers its assistance to local societies and particularly Dr. Donald E. Frein of Leeton, Missouri, and the Johnson County Medical Society in providing health column materials from the AMA and other sources for use if the Society wishes to contribute such a column to weekly newspapers. The Committee recommends that the general topic of such newspaper columns be discussed at the coming meeting of society presidents and secretaries.

On motion of Dr. Barger, duly seconded, the report was accepted.

STATEMENT ON H.R. 3920

Copies of the statement of the Missouri State Medical Association on H.R. 3920, presented by Dr. Durward G. Hall, Representative in Congress, were presented. It was stated that the Statement would appear in the January issue of Missouri Medicine.

A statement from the St. Louis County Medical Society to the Committee on Ways and Means was given to the Councilors.

INSURANCE

Mr. O'Brien reported that following the discussion on overhead expense insurance for members that he had received one bid and that another was in process and would be reported at the next meeting.

It was pointed out that both Jackson County and St. Louis Medical Societies have group term life insurance available for members and that the carrier wishes to offer the same coverage to the balance of MSMA membership. After discussion, on motion of Dr. Hollweg, duly seconded, it was voted that a committee be ap-

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*Donnelly, J.: A.M.A. Arch. Environmental Health 6:697, June, 1963

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pointed to study this type of insurance program for members.

Dr. Stuart appointed the following committee: Drs. Doyle, Furlow, Whitener and Macnish.

WOMAN'S AUXILIARY

Dr. Hollweg said that he had discussed the Advisory Committee to the Woman's Auxiliary with Mrs. Crispell, president of the Auxiliary. It has been suggested that in the future the Advisory Committee be composed of the immediate Past President of MSMA, Chairman of the Council and the Councilor from the district in which the president of the Auxiliary resides.

On motion of Dr. Hollweg, duly seconded, this was approved.

The Auxiliary also requested that the Roster issue be mailed by MSMA to all members of the Auxiliary. On motion of Dr. Barger, duly seconded, it was voted that the Association mail rosters to members of the Auxiliary.

Dr. Hollweg stated that a decision would be made at the coming meeting of the Auxiliary whether or not their Student Loan Fund would be turned over to MSMF.

MSMF

Dr. Furlow gave the following report of the finances of the Missouri State Medical Foundation:

Status as of December 6, 1963

Total Loans to date (224 loans to 105 students)	$104,020.00
Loans for first semester (40 loans) 1963-1964	19,000.00
Balance on hand	$ 11,266.30

In discussion it was brought out that the MSMA might advance some money against the assessment for 1964 in case funds were needed for the second semester; also it was pointed out that it would be a good thing to get out another letter of solicitation at this time, which was agreed to.

On motion of Dr. Furlow, duly seconded, it was voted that the report be accepted and that funds be advanced by MSMA if necessary.

MEETINGS

Dr. Hollweg reported attending the meeting of the Missouri Hospital Association and said that there seemed to be good rapport; he reported on the conference on "Quackery" sponsored by AMA and the Federal Pure Food and Drug Administration, held in Washington, D. C.; Mr. McIntyre attended in his place an exploratory committee meeting on "Total Patient Care," attended by hospital administrators, nurses, physicians and ministers and hospital chaplains. A workshop on this subject is planned by the group, and Dr. Whitener, Chairman of MSMA Committee on Medicine and Religion will serve on the planning committee.

CIVIL DEFENSE

Dr. Siegel presented material to the Councilors on Health Mobilization Activities, general information concerning Missouri's Civil Defense Emergency hospitals and the Division of Health's expanded function training. He said that four exercises with training had been held, at Carrollton, Cape Girardeau, Hayti and Springfield. He said that the 200 bed emergency hospitals in the state are being up-dated. He reported that in the "Self Help" program Missouri ranked fourth in the nation in the number of people who had had the course. Dr. Siegel requested that the expenses for a postgraduate course to be held in Columbia in January be defrayed to the extent of $100.

On motion of Dr. Furlow, duly seconded, it was voted to grant the request for $100.

On motion of Dr. Benoit, duly seconded, the report was accepted.

"UNDER THE CAPITOL DOME"

Mr. Foristel discussed the Washington AMA office. He said that 600 bills of interest to medicine had been introduced in the present Congress and that it would probably go to 900. He said that bills passed that the AMA had approved were the medical school construction bill, the mental health bill and the mental retardation bill. He said that the Medicare program, for dependents of service personnel, would probably be reduced. He outlined the hearings on the King-Anderson bill which began on November 18, the hearings to be reopened about the second week in January. He praised the work of Representatives Tom Curtis and Durward G. Hall in the hearings and also Dr. Annis.

PROGRAM

Dr. Matthews presented a preliminary program to the Council. Two programs on economics were suggested and the Council favored "Rising Hospital Costs and the Doctor."

Mr. Singleton presented a timetable on publicity for the Annual Session.

In discussion of the Annual Session, Mr. Hollister Smith suggested that the members of MSMA be entertained for cocktails and buffet dinner at the St. Louis Medical Society Building on Sunday evening. He said that if the Council approved, he would present this to the Council of St. Louis Medical Society this week.

On motion of Dr. Hollweg, duly seconded, it was voted to accept this invitation if it is forthcoming.

WILSON-MITCHEM SUIT

The case of Wilson-Mitchem vs. State Board of Registration was discussed. It was said that a motion to intervene had been filed for the MSMA, and that also such action was being filed by the Missouri Osteopathic Association. The situation in the State of Washington which is considering a short-term school for the purpose of conferring M.D. degrees was discussed.

MEDICAL CENTER

Dr. Wilson reported that work is being done on the Medical School curriculum and that as of June 1, 1964, preceptorships will be required and that information on community health programs will also be part of the curriculum. He said that construction on the new VA hospital would begin in 1965, which means there will be 1,000 beds when this is completed. He said that if more classrooms and laboratories were available, the number of students in the medical school could be increased.

INFANT AND CHILD CARE

Dr. Kinder presented the following report for the Committee on Infant and Child Care.

this conference was that health should be taught in the schools as a solid subject the same as mathematics, English, etc.

Smoking in Schools—After discussion, the Committee voted to recommend that the Association take a position against smoking in schools and recommend that all measures possible be used to prevent smoking by students in schools.

Dental Health for Handicapped Children—The dental health program for handicapped children under the State Crippled Children's Service was discussed. At present there are two mobile units purchased by Elks Clubs of Missouri, operated by the State Division of Health in cooperation with local dentists being used. The ultimate goal is five such units.

In discussion it was brought out that there were no state facilities for care of the mentally retarded child under 5 years of age needing institutional care. Dr. Hardwicke said that money was to be made available for planning of institutions and evaluation centers which might alleviate this situation. He asked that an individual or committee be appointed to work with a state committee on this.

On motion of Dr. Furlow, duly seconded, the Chairman of the Committee on Infant and Child Care was designated for membership on this committee.

On motion of Dr. Hollweg, duly seconded, the report was accepted.

RESOLUTION RE: JEFFERSON CITY BRANCH OF MSMA

Dr. Tietjen opened the discussion of the resolution concerning full-time representation of MSMA in Jefferson City by stating that it would be logical to have the MSMA office in Jefferson City, the Capital city. He stated the reasons for an office in Jefferson City as central location and easily accessible, it is the center of activity of all politics, other agencies are located there, that year round contact with other groups was important.

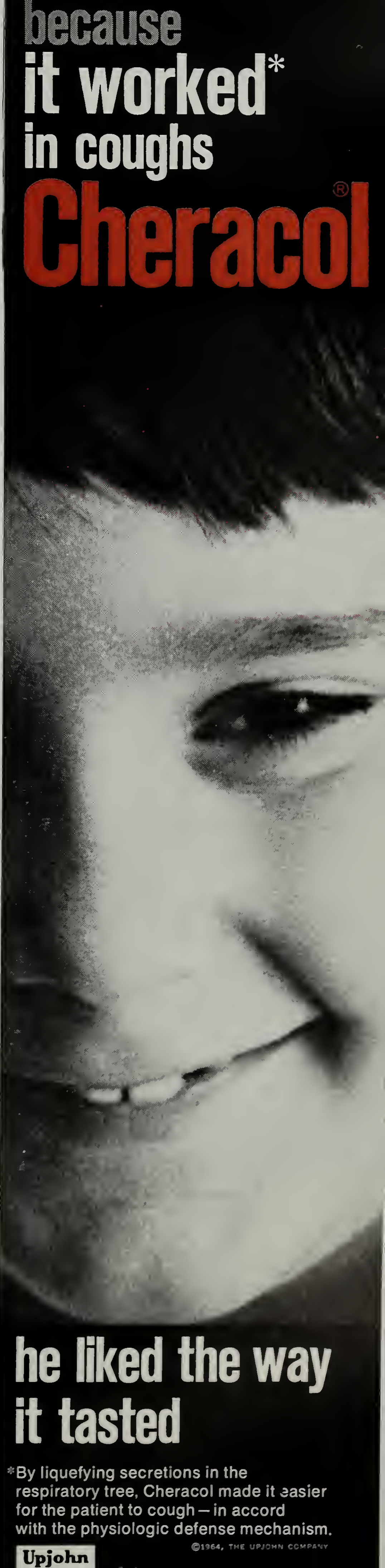
Dr. Watts said that someone was needed in Jefferson City at all times for contact with the Division of Health and other departmental heads; that too much depends on one person, Tom O'Brien, but that constant contact was needed; that 53 state organizations have headquarters in Jefferson City, the MSMA and LPN being the only health organizations not having offices there.

Questions raised dealt with the cost of such an office, the success of MSMA in the last General Assembly, amount of personnel needed in such an office, members' attitude toward a raise in dues if necessary. The resolution and the action of the House was read as follows:

> WHEREAS, The contacts between government and organized medicine are becoming increasingly frequent and intimate, and
>
> WHEREAS, A progressively important function of the executive staff (of MSMA) is representation of organized medicine to and before various governmental bodies and agencies, and
>
> WHEREAS, Such representation would be enhanced by the residence of a member of the MSMA executive staff at the seat of government in Jefferson City; now, therefore be it
>
> *Resolved,* That the Council shall make necessary budgetary preparations as required for the 1964 opening of a permanent branch office in Jefferson City, and be it further
>
> *Resolved,* That the Council with the advice of the Executive Secretary, designate and/or employ a full-time member of the executive staff who shall be resident in Jefferson City as an assistant to the Executive Secretary.

Report of the Reference Committee on Miscellaneous Affairs.

"After hearing many speakers pro and con, the Committee recommends that this resolution be returned to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the Council for further study with a request that a report be made to the House of Delegates at its annual meeting in 1964."

Dr. Barger moved that the Council take under advisement and report at the next meeting. This was duly seconded.

Dr. Furlow offered an amendment that a committee of the Council be appointed to study the problem. This was duly seconded. On vote, the amendment to the motion was adopted as was the motion.

Dr. Stuart appointed a committee as follows: Drs. Hollweg, Chairman; Furlow, Doyle, Matthews, Barger and Stuart, ex-officio.

COMMITTEE ON MENTAL HEALTH

Dr. Haddock presented the report of the Committee on Mental Health as follows:

The Committee on Mental Health met at the Missouri Hotel, Jefferson City on October 13, with Dr. George W. Forman, St. Joseph, chairman, presiding. Others present were: Drs. William F. Clary, Springfield; G. H. Lawrence, St. Louis; James N. Haddock, Clayton; Henry V. Guhleman, Jefferson City; George Ulett, Jefferson City and Mr. Thomas P. Fox, St. Louis.

Legislation 72nd General Assembly—Dr. Forman reviewed the legislation relating to mental health, enacted in the 72nd Missouri General Assembly. Discussion included: (a) Senate Bill No. 56, establishment of three Intensive Treatment Centers; (b) Senate Bill No. 57, establishment of funds for the mental health centers in Senate Bill No. 56; (c) Senate Bill No. 109, temporary licensure for physicians not citizens of the United States, and (d) Senate Bill No. 143 relating to commitment, acquittal, release and discharge of the mentally ill in criminal cases. The Missouri Bar Association is preparing an analysis of Senate Bill No. 143 to assist the medical profession in the implementation of this law.

Not Enacted—H.B. 675 concerning malpractice actions against physicians employed by the state of Missouri. This bill was judged by the committee as good legislation and worthy of introduction in the 73rd General Assembly.

The Committee approved request of Dr. Ulett that appreciation be recorded from the Division of Mental Diseases to MSMA for support and assistance with the program introduced by Dr. Ulett, S.B. 56.

Division of Mental Diseases—Dr. Ulett stated that future plans include reduction in the number of patients hospitalized who should not be in mental hospitals and the utilization of such funds to better advantage. Care of patients who require hospitalization as well as new facilities to render such care will be given top priority.

Plans are under consideration for centers to care for retarded children, across the state. Such services will include for example: out-patient day care rendered to children brought to the center and treated during the day while parents are employed. Purchase of land in Springfield, to provide one such center is now under consideration.

As recommended in President Kennedy's program, Missouri Mental Health Centers will include in-patient, out-patient, and care for retarded children. Plans, however, will be made with full awareness of the shortage of medical staff in Missouri.

Dr. Ulett called attention to the fact that the President's program could attract psychiatric staff away from state programs creating a more acute shortage than that which exists at present.

The Committee agreed that for the present, Missouri should concentrate on the implementation of Dr. Ulett's program, the establishment of the three intensive care centers including (a) in-patient, (b) out-patient, and (c) day care for mentally retarded. The Committee suggested that such action would, for the present, satisfy the comprehensive treatment program recommended by the President.

Psychologists in California—Dr. Ulett reported on attempts of psychologists in the state of California to expand their field and status to the level of psychiatrists.

It was suggested that the Association office address the Southern California District Asssociation for more information. Dr. Haddock will furnish the address.

Study of State Hospital No. 2 at St. Joseph—Dr. Ulett reported on the latest developments of investigation by an Interim Legislative Committee of the State Mental Hospital at St. Joseph. Dr. Ulett reported his complete support of the superintendent in his administrative actions investigated by the Interim Committee.

Question was raised regarding monopoly of news media in the City of St. Joseph. It was suggested that inquiry of such monopoly should be pursued by MSMA. Dr. Clary will provide information regarding a similar experience in another state.

It was suggested that in the interest of providing the best patient care in Missouri Mental Institutions, and to protect representatives of the medical profession while in the process of providing such care, developments in St. Joseph be followed closely by the committee and the MSMA.

If some action seems necessary, it was unanimously agreed that the St. Joseph Mental Health Association might consider appointment of a special committee of physician members of the Eastern and Western Missouri branches of the American Psychiatric Association to study conditions at St. Joseph State Hospital No. 2.

Mental Health Insurance—Dr. Lawrence reported that he is awaiting information from Dr. Al Frank of the Missouri Eastern Division—Committee on Insurance. It was agreed that further study should be made including reports of negotiation with labor unions on new and revised labor contracts which include mental health coverage.

Future Plans—Dr. Forman reviewed letter of October 10, addressed to all county secretaries regarding local mental health committees, speakers, and topics for discussion. It was reported that to date, St. Louis County was the only medical society which has reported a local committee on Mental Health. It was agreed that three months time should be allowed for action on the recommendations. Results will be reported to Dr. George Forman and if necessary, a follow-up letter will be written urging action by the county societies. It was agreed that the second letter could include an endorsement of the Missouri Division of Health and the Missouri Division of Mental Diseases.

It was agreed that all interested county societies be informed that the Eastern and Western Psychiatric Associations, as well as the University of Missouri, have Speakers Bureaus.

Missouri Mental Health Association—Attention was called to the fact that lay membership of the Missouri Mental Health Association should include physicians'

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wives. Concern was reported to the effect that public information is not disseminated correctly by the lay members of this organization.

On motion of Dr. Barger, duly seconded, the report was accepted.

A mental health clinic in Southeast Missouri was discussed and Dr. Haddock said that the Committee on Mental Health will study this.

RULES ON S.B. 109

Dr. Perry presented the following rules and regulations pertaining to S.B. 109, as approved by the State Board of Registration for the Healing Arts:

Rule No. 1—(a) The applicant is required to make application upon a form prepared by the Board. (b) No application will be considered unless fully and completely made out on the specified form and properly attested. (c) An applicant shall present with the application one photograph in size not larger than 3½ by 5 inches, properly attached to the application blank. (d) Completed applications shall be sent to the Executive Secretary of the State Board of Registration for the Healing Arts, Box 4, Jefferson City, Missouri 65102, by the Superintendent of the hospital. (e) The Board shall charge each person applying to it for a certificate of temporary licensure to practice as a physician and surgeon in the State of Missouri, a fee of five dollars ($5.00). A fee of five dollars ($5.00) shall be charged annually in the event the temporary license is renewed. The fee shall be sent in the form of a bank draft or postal money order or express money order. (Personal Checks Will Not Be Accepted.)

Rule No. 2—(a) Applicant shall secure a recommendation of his moral, ethical and professional conduct from the Superintendent and/or Chief of Staff in the hospital in which he desires to work. (b) Applicants shall notify the Board when they leave the hospital where they are employed. (c) Superintendent or Director of the hospital to which an applicant wants to go, shall notify the Board when an applicant desires to leave or move from one hospital to another. (d) Applicant will be required to appear before the Board at the Board's discretion.

Rule No. 3—(a) Executive Secretary will sign the temporary license. (b) Executive Secretary will submit a list of the names for renewals to the Board for approval.

Rule No. 4—(a) A letter of certification shall be sent only to the Superintendent of the hospital.

Rule No. 5—(a) The Board may terminate a temporary license at its own discretion.

Rule No. 6—(a) Superintendent or other officials of hospitals approved by the Board for temporary licensure, are to furnish the Executive Secretary a list of personnel employed in the hospitals as of January 15 and July 15, of each year.

Rule No. 7—Foreign Graduates—(a) Temporary licenses may be held for a maximum of five (5) years,

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renewable annually or until eligible to take the Missouri State Board examination. (b) Applicant must have and show proof of a permanent ECFMG certificate or show evidence to the Board that he has passed the equivalent licensing Board examination in another state. (c) Applicant must file photostatic copies and official translations of their medical credentials with the application. Before temporary license can be renewed, applicant must have an application completed by their school of graduation.

Rule No. 8—Interns, Residents and Fellows—(a) Interns, residents and fellows may hold a temporary license for a maximum of five (5) years, renewable annually. (b) Applicants who are graduates of approved schools in the United States and are serving as an intern, resident or fellow in hospitals approved by the Board for temporary licensure in the State of Missouri, must furnish satisfactory evidence of having attended an approved school and receiving their degree by filing a photostatic copy of the professional diploma with the application.

COMMITTEE ON MATERNAL WELFARE

The report of the Committee on Maternal Welfare was presented as follows:

A meeting of the Committee on Maternal Welfare was held at the Missouri Hotel, Jefferson City, on October 6, with Dr. A. C. Trueblood, Clayton, chairman, presiding. Others present were: Drs. C. G. Stauffacher, Sedalia; MacDonald Bonebrake, Springfield; E. E. Wadlow, St. Joseph; Eugene G. Hamilton, St. Louis; Leonard A. Wall, Kansas City; H. M. Hardwicke and D. M. Love, Jefferson City; Mr. Clyde Burch and W. W. Marshall, Jefferson City; Ray McIntyre and Helen Penn, St. Louis.

Purpose—Dr. Trueblood said that the Committee needed to consider two things: to obtain from Mr. Burch an opinion as to any legal liability of the committee connected with the studies that the committee does and the possibility of publishing case reports, and program for the Annual Session.

Work of Committee—The studies carried on by the Committee were explained to Mr. Burch who is from the Attorney General's office and he answered questions from the members present. Discussion included, the reporting by the Division of Health to the committee of maternal deaths would be covered legally because it is for research purposes, there is no coercion if the involved physician does not wish to discuss the case, that identification, even geographical, is not necessary for the dissemination of information by the committee, what could and could not be subpoenaed in any legal procedure, the similarity of a published CPC or case report to the work of the committee, the possibility of changing dates to help in lack of identification, that the committee could not legally swear that date is given to them correctly.

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Following discussion, Mr. Burch suggested that he address a letter to Dr. Hardwicke and outline his expressed views on the legal points which could be of help to the committee.

On motion of Dr. Bonebrake, it was voted to ask that an informal opinion be given in writing, including opinion as to what constitutes identification.

Annual Session—The value of an annual report by the committee at the luncheon meeting was stressed and it was stated that the report would come from the Eastern Division of the state at the 1964 session.

Guest Speaker—Dr. Trueblood said that a place had been made on the program for a gynecologic presentation in a surgical panel on Monday afternoon, March 9.

After discussion, it was left to Dr. Trueblood to obtain the speaker for the afternoon session and to possibly ask him to give a talk at the luncheon meeting. It was pointed out that the speaker would also be asked to speak at a dinner that evening of the St. Louis Gyn. Society.

Dr. Hardwicke said that the letter referred to in the report had been received and turned over to the Committee.

On motion, duly seconded, the report was accepted.

NEXT MEETING

It was decided that the next meeting would be held on February 2, a one day meeting if possible.

Byron M. Stuart, M.D., *Chairman*

SEMINAR FOR FAMILY PHYSICIANS

The Greater Kansas City Academy of General Practice, the Western Missouri District Branch of the American Psychiatric Association and the G. Wilse and Olive B. Robinson Memorial Fund will present the 13th quarterly postgraduate seminar for family physicians on February 16.

Gene L. Usdin, M.D., assistant professor of clinical psychiatry at Tulane University, will speak on "Neurosis and Trauma."

The seminar will be presented at the Neurological Hospital, 2625 West Paseo, Kansas City, from 2:00 p.m. to 7:00 p.m.

A panel of physicians of the Greater Kansas City area will participate in the latter part of the program, discussing further the topic and conducting a question and answer period.

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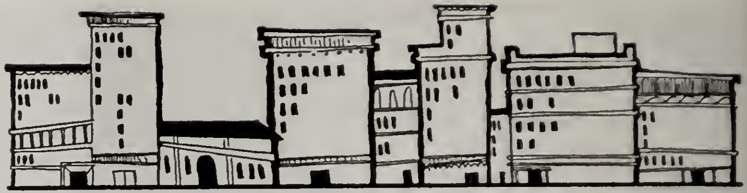

WASHINGTON UNIVERSITY

Shriners' Hospital Acquired

Washington University School of Medicine has purchased the old Shriners' Hospital for Crippled Children. The property is south of the Medical School. The Shriners' Hospital recently moved into a new building in St. Louis County. The Medical School will utilize the property, which includes the central hospital building, a nurses' hall and a private residence, in their expansion and development program. Among possibilities are expansion of research facilities in the fields of cancer and heart research and installation of computer facilities.

Grants

Washington University School of Medicine has received $4,444,231 in research and training grants from the U. S. Public Health Service within the last six months.

Of the total, $559,059 will be used for new research and training projects at the school, Dean Edward W. Dempsey, said. The balance of $3,885,172 represents funds for continuation of research and training programs now underway.

Largest of the new research grants went to Dr. Richard M. Krause, professor of epidemiology. He will use a grant of $78,815 for a chemical study of hemolytic streptococci. He will investigate the hypothesis that complications of strep infections such as rheumatic fever or acute nephritis may be an allergic reaction to the streptococci. Many allergic reactions have a known chemical base.

Among special awards was a Research Career Award to Dr. Albert Roos, research professor of anesthesiology and associate professor of physiology. The award is the highest made by the U. S. Public Health Service and supplies full salary for five years.

Dr. Adolph I. Cohen, research assistant professor of ophthalmology and anatomy, received a grant of $61,563, which he will use for an electron microscopic study of the retina. He will do special studies on the nervous pathways within the retina.

Computers will be utilized in a study by Dr. John A. Stern, professor of medical psychology, to evaluate and compare electrical activity recorded from different body sites in psychiatric patients. The grant of $56,596 will support the project which makes use of psychological measures to attempt to classify groups of psychiatric patients. The initial work deals mainly with brain wave activity and the measures of the autonomic nervous system.

Dr. James O'Leary, professor and head of the department of neurology, received two grants totaling $46,955. One project will be a survey of cerebrovascular disease. He is also engaged in a computer project analyzing responses from the nervous system.

Dr. Erik Carlsson, assistant professor of radiology, has received a $46,718 grant. The purpose of his investigation is to develop a method of applying a thin coating of contrast material to the intra-cardiac structure, such as cardiac valves, in order to make it possible to visualize the dynamics of the heart by x-ray examination.

Dr. Joseph R. Williamson, assistant professor of pathology, will use a grant of $36,495 to study the movement of fats in the body between cells.

A method for earlier diagnosis of glaucoma, an eye disease involving internal pressures, is the goal of a project of Dr. Robert Moses, associate professor of ophthalmology, with support of a $29,407 grant. The grant will be used to refine technics of measurement of the resistance of aqueous humor, a fluid within the eye, and measurement of the venous blood pressure within the eye.

Dr. William F. Bridgers, instructor in preventive medicine and medicine, received a $23,339 grant for a study of genetically controlled metabolic regulatory devices in mammals. He will study the factors controlling the synthesis of amino acids, which are necessary to make proteins in the body.

Dr. Joe W. Grishman, assistant professor of pathology, will study factors controlling DNA synthesis in the liver with support of a $21,045 grant.

A grant of $16,230 to Dr. Vincent Marchesi, assistant in pathology, will be used to support a study of the structural and enzymatic changes associated with small blood vessels and blood elements in conditions of acute inflammation.

A grant of $10,132 will be used by Dr. Justin J. Cordonnier, professor of urology, and Dr. William T. Bowles, instructor in urology, for the investigation of the effects of urinary diversion on kidney function. They will study a large group of patients who have had surgical removal of their bladders for cancer and other disorders and evaluate the ileal bladder, a substitute bladder constructed from the small intestine.

Dr. Lucy J. King, instructor in psychiatry, has received a grant of $6,000 to study the biochemical effects of treatments important in psychiatry. These include the amphetamine drugs, which are mood elevators and which are also used in the treatment of children who have brain damage. She will also study electrical stimulation, a treatment for severe depression.

Dr. James C. Peden Jr. has received a $9,916 grant for study of a protein in plasma which is necessary for clotting of the blood. He will study the changes that take place when blood coagulation factor 10 is activated. Dr. Peden is instructor in medicine and preventive medicine.

Special Gifts

The Division of Neurosurgery of Washington University School of Medicine, St. Louis has received a gift of $100,000 from the Allen P. and Josephine B. Green Foundation. The gift will be used to support basic research on the nervous system, Dr. Henry G. Schwartz, professor of neurosurgery, said. Under investigation will be fundamental problems of the central nervous system that might bear on Parkinsonism, cerebral palsy and allied diseases. The Green Foundation of Mexico, Mo., has been active in support of research in the neurosurgery division for several years.

Mr. Edward Mallinckrodt Jr., St. Louis philanthropist, has given $51,000 to Washington University School of Medicine for construction and equipping of laboratory facilities within City Hospital No. 1. The facilities will be used by Washington University faculty members who devote full-time to teaching and research at City Hospital. This is the first gift of a private individual to a city hospital in St. Louis for the construction of research facilities.

"We are pleased and honored that Mr. Mallinckrodt should make us a gift for this purpose," Dr. Edward W. Dempsey, dean of the Medical School, said in announcing the gift. "The development of excellent teaching services in our hospitals is necessary if St. Louis is to maintain its leadership in medicine. This gift will allow us to assist the city in improving the training of residents and interns by providing facilities in

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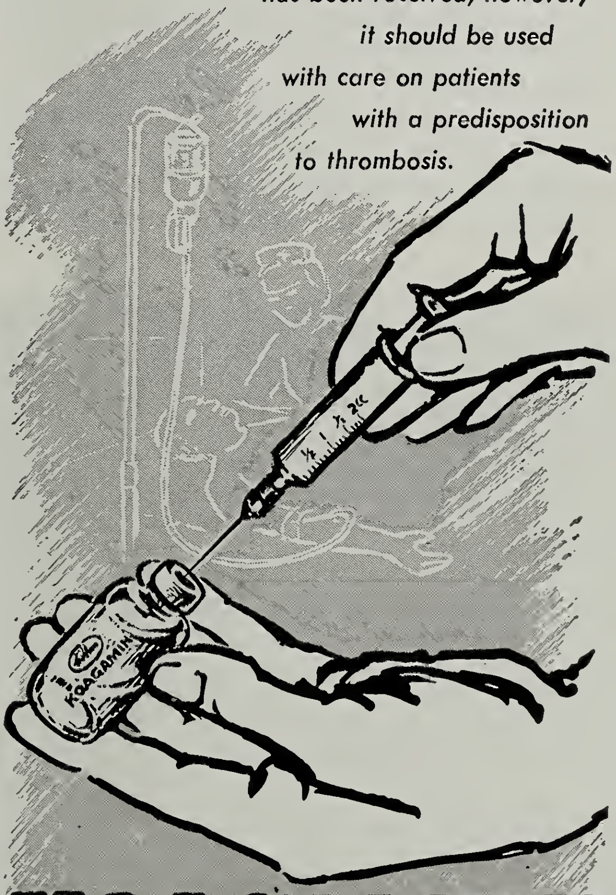

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which the medical staff can carry out independent research."

Mr. Mallinckrodt has been active in support of the Medical School for many years. He has recently given funds for expansion of the Edward Mallinckrodt Institute of Radiology, named for his father, and for the support of the Division of Anesthesiology.

The new laboratory facilities will be used by Dr. Gerald Perkoff, the university's chief of service at City Hospital and associate professor of medicine, and other faculty members who will be named soon to the staff. There will be also facilities for medical student research projects.

Included in the project will be a muscle disease research laboratory, a metabolic laboratory, a coagulation laboratory and two general biochemical rooms. This will furnish space for four investigators. The Medical School hopes eventually to have six to eight full time physicians located at City Hospital. Work on the four laboratories totaling 2,800 square feet is expected to be completed by March.

There has been an affiliation between Washington University School of Medicine and City Hospital for more than 30 years. The University medical service has had a full-time director since 1959. Third year medical students spend six weeks at the hospital attending patients on the medical wards and additional time attending surgery patients. There are other University services in other specialties.

Scott Award

Dr. Oliver H. Lowry, professor and head of the department of pharmacology of Washington University School of Medicine, St. Louis, has received a John Scott award. The award, which is given by the Board of City Trust of Philadelphia, will be presented at a meeting of the American Association for the Advancement of Science in Cleveland.

Dr. Lowry is one of four scientists from this country, Italy and England to receive the award this year.

The award, which consists of a copper medal, a scroll and $2,000, was established 147 years ago by John Scott, a chemist of Edinburgh, Scotland. It is awarded to "ingenious men and women who make useful inventions."

Dr. Lowry received the award for a method of isolating, preparing, weighing and chemically studying single nerve cells and subcellular particles.

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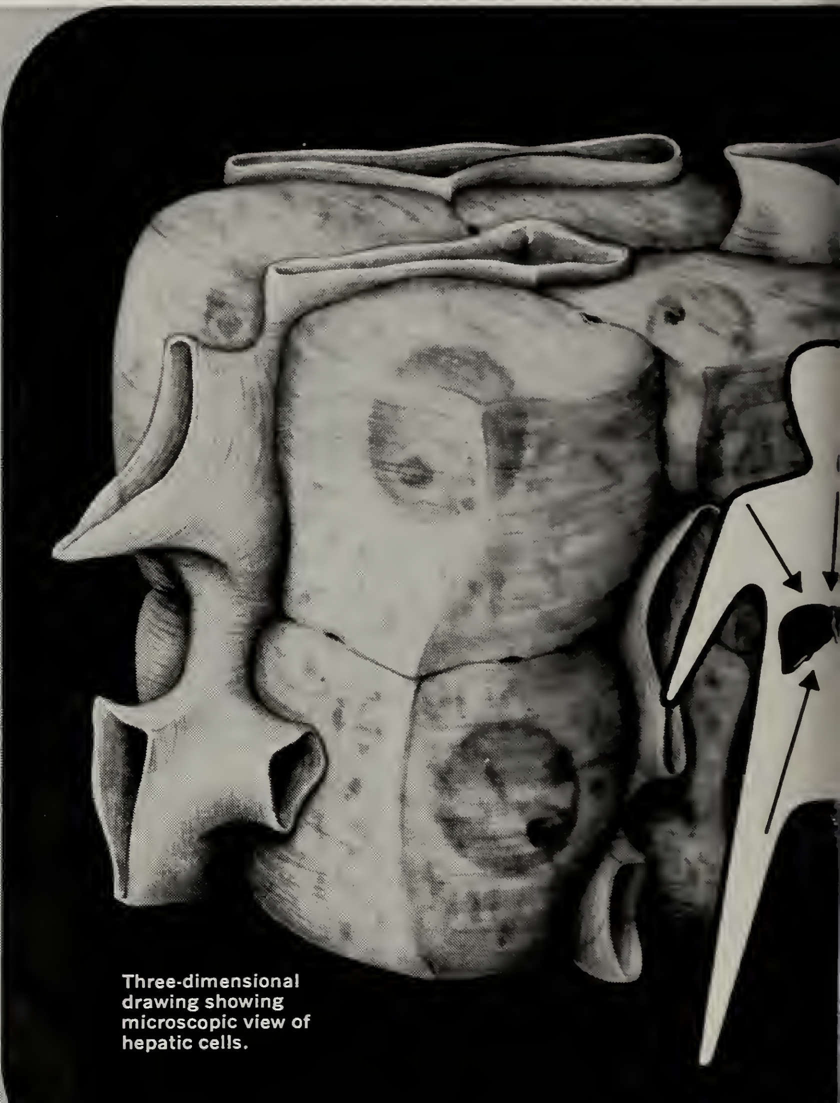
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Trips and Talks

Dr. James A. Green, associate professor of the Department of Anatomy at the University of Missouri Medical Center, spent from December 13 to 21 in Mexico City. The trip was made to collect research material and to consult with Dr. Manuel Maqueo. Dr. Maqueo and Dr. Green have been carrying on a collaborative study of the human ovary for two years.

Dr. Jerry W. Brown, associate professor of the Department of Anatomy, attended a meeting of the Association for Research in Nervous and Mental Diseases, held in New York City on December 6 and 7. About 400 neuroanatomists, neurologists, neurosurgeons, psychiatrists and psychologists attended the meeting.

Dr. J. M. Martt, associate professor in the Department of Medicine and director of the Heart Station at the Medical Center, addressed the local AAGP at St. Francis Hospital in Washington, Mo., on January 7. The topic of discussion was the use of cardiac pacemakers and the defibrillator.

Dr. Richard M. Hyde, assistant professor of Microbiology at the Medical Center, attended a meeting of the National Cancer Institute in Washington, D. C., on December 2. He gave a report on the progress made in the University laboratory on methods of detecting immunologic tolerance.

Dr. Donald Durand, assistant professor in the Department of Microbiology, attended a meeting of the Missouri Branch of the American Society for Microbiology in St. Louis on November 23. The meeting was held at the Research Center Building, Monsanto Chemical Company.

Dr. Herbert S. Goldberg, professor of microbiology, presented a paper entitled "Leptospirosis in Random and Select Populations" November 14 at a Kansas City American Public Health Association meeting. Coauthors of the paper are Dr. D. Blenden, assistant professor of veterinary bacteriology, and Dr. J. T. Logue, clinical assistant professor of medicine. On November 5 Dr. Goldberg lectured in the Stephens College, Columbia, "Science Seminar" via the "Tele-lecture Series." The talk was heard by six universities around the country via telephone transmission. Questions and answers were exchanged. The subject of the talk was "Competitive Molecules-Antimetabolites." Dr. Goldberg also attended a meeting of the Missouri Branch of the American

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Society for Microbiology at St. Louis on November 23. He presided as president of the Missouri Branch. He also presided at a Section on Diagnostic Procedures at Leptospirosis Research Conference on December 3 through 5 in Chicago, Ill.

Dr. Frank B. Engley Jr., professor and chairman of the Department of Microbiology at the Medical Center, attended the national meeting of the American Public Health Association in Kansas City November 11 through 15 and the Missouri Branch meeting of the American Society for Microbiology in St. Louis on November 23. He also attended a joint meeting of Missouri Public Health Association and Missouri Association of Social Welfare in Jefferson City, December 1, and presented lectures at St. Louis College of Pharmacy on December 10 and 12.

Dr. David G. Hall, professor and chairman of the Department of Obstetrics and Gynecology at the University Medical Center, presented a lecture entitled "Stimulation of Labor" at a meeting of the St. Charles County Medical Society in St. Charles, Mo., on November 26.

Dr. Robert E. Froelich, assistant professor of psychiatry, presented a paper and entered into open discussion at a meeting of State and Provincial Health Authorities of North America in Kansas City on November 9. The topic of discussion was the problems facing medical practice today and what public health's role can or should be in assisting the practicing physician to meet these problems.

Dr. John A. Buesseler, professor and chief of Ophthalmology, presented a postgraduate course entitled: "Ophthalmic Radiology: Diagnosis" at the Annual Meeting of the American Academy of Ophthalmology and Otolaryngology on October 21. Dr. Buesseler was a guest speaker for the 85th Annual Meeting of the Montana Medical Association on September 12. The subject of discussion was "Tissue Banking and Surgical Utilization of Homografts." He was also a guest speaker for the Montana Academy of Oto-Ophthalmology, Billings, Mont., where he presented two talks: a) "Organizational and Operational Significance of Eye Tissue Banking to the Practitioner," and b) "The Utilization of Fresh and Preserved Homologous Tissue in Ophthalmology and Otolaryngology."

Dr. Hugh E. Stephenson Jr., professor of the Department of Surgery, attended a Founding meeting of Thoracic Surgery Society held in San Francisco, Calif., and a meeting of the American College of Surgeons in San Francisco.

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Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet. Colored illustrations will be used when suitable if author assumes the actual cost.

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WASHINGTON

Federal Medical Care Program

Proposal Burden to Social Security Taxpayers.

This was the heading of a release of the statement made by Mr. Edward Staples, Executive Director of Missouri Public Expenditure Survey before the U. S. House Ways and Means Committee.

His statement in part follows:

When our social security system was first established, the tax rate on employees and employers was 1 per cent each, applicable to a taxable wage base of $3,000. Since that time, including the increase which became effective on January 1, 1963, the tax rate has been increased seven times, until at present the rate is 3⅝ per cent on both employee and employer. Under existing law two additional rate increases are scheduled, in 1966 and 1968. These will bring the social security tax rate on employees and employers to 4⅝ per cent each—or to a combined rate of 9¼ per cent.

In addition, it should be noted that the taxable wage base against which this tax is applied has also increased three times, and at present stands at $4,800.

In short, the tax paid by employee and employer combined has increased almost six-fold, from a maximum of $60 at the inception of the program to a maximum of $348 under present tax rates and taxable wage base.

The tax paid by the self-employed, of course, has been maintained at one-and-a-half times that of other workers—and presently is at a rate of almost 5½ per cent.

Under the bill before this committee, H.R. 3920, the tax rate would be increased by ¼ of one per cent each on employees and employers, over and above the currently scheduled increases, and the taxable wage base against which the tax would apply would also be increased, to $5,200. Thus, if this proposal were to be enacted, on top of presently scheduled tax rate increases, the combined rate on employee and employer in 1968 would be 9¾ per cent on an enlarged tax base.

The social security tax is, in short, becoming an increasingly burdensome tax for a growing number of persons. For the low income wage earner, such increases in the social security tax might wipe out—or more than wipe out—any benefit which he would derive from the pending tax reduction bill. . . .

Another factor which in my view should be taken into consideration is the history which has been developed over the years for expanding the coverage and increasing the benefits under this program. On at least eight occasions since this program went into effect, Congress has enacted amendments expanding coverage to new groups, and benefit increases have also been approved on a number of occasions.

That this has had some effects upon the program's financial status seems apparent. The record indicates that expenditures have exceeded receipts in the Old Age and Survivors Insurance Trust Fund in five of the last seven years.

Further, one of the most recent additions to the social security structure, the disability benefit program, appears to be in some trouble. Expenditures from the disability insurance trust fund exceeded receipts into the fund in calendar 1962, and according to official reports, as I read them, were expected to do so again in 1963, this year, and in each of the next three years. The fund's trustees have made a proposal designed to put it on firmer financial footing. In this same connection, we have noted the proposal of Chairman Mills (H.R. 6688) which is designed to improve the actuarial status of the trust funds by raising the amount of taxable income for social security from the present $4,800 to $5,400. This measure, as I understand it, would also allot a proportion of the increased social security revenues to the disability fund.

Thus, we see the occasion arising for increased social security tax payments even without adopting H.R. 3920.

“I believe it is fair to indicate that the pending proposal to establish a compulsory health insurance program under social security would provide for limited health benefits. If adopted, the H.R. 3920 program would be subjected to great pressures for further expansion. Experience under our social security system shows repeated broadening of its provisions, accompanied by rate increases, as I have already indicated. Demands could be expected to include larger and larger segments of the population under the medical care provisions, with each expansion accompanied or followed by rate increases, until virtually the entire population would be included. Thus, H.R. 3920 is a foot-in-the-door type of proposal. It inevitably would lead to much higher social security tax rates on employees, employers and the self-employed. . . .

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Side effects: The only significant untoward effects that have occurred are mild anorexia and an occasional tendency to constipation. However, discontinuance of Pediacof has seldom been required. Mild drowsiness occurs in some patients but, when cough is relieved, the quieting effect of Pediacof is considered beneficial in many instances.

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Across
Missouri

Mental Health Planning Program Established

A Comprehensive Mental Health Planning Program has been established in Missouri. Directing the program will be Edwin F. Gildea, M.D., St. Louis. An executive committee to assist will consist of Vernon E. Wilson, M.D., Columbia; H. M. Hardwicke, M.D., Jefferson City; George A. Ulett, M.D., Jefferson City; Hubert Wheeler, Jefferson City, Commissioner of the Department of Education; C. Rouss Gallop, Jefferson City, Director of the Department of Public Health and Welfare, and Ray McIntyre, St. Louis, MSMA, and Chairman of the Missouri Health Council.

The purpose of the program is to develop a comprehensive plan through a cooperative effort between the public and private health, educational and medical organizations. It is expected that various mental health efforts such as preventive programs, hospital programs, therapeutic programs and community health programs can be coordinated.

State Board of Healing Arts Hears Advertising Charge

"A case which could have far-reaching implications on medical advertising ethics was taken under advisement by the Board of Healing Arts," according to the *St. Louis Globe-Democrat* on January 27.

"The seven member body heard charges brought against Dr. Virgil A. Bittiker, an Excelsior Springs osteopath. He is accused of advertising in certain national magazines allegedly in a quest for patients. Dr. Bittiker is connected with the Excelsior Medical Clinic, Inc.

"Dr. William D. Perry of St. Louis, chairman of the board, said no decision in the case is expected before the board's next meeting in March. He said the decision to be rendered is an important one with 'far-reaching implications.' Attorneys for both sides in the case have been directed to prepare written briefs for the board.

"The board regulates the licensing of physicians. Dr. Perry said it could revoke Dr. Bittiker's license if charges against him prove to be true."

Drugs Under New Law Discussed

The Medical Advisory Committee to the Division of Welfare met in January and received a report concerning the present status of the recently inaugurated drug and dental program for persons receiving Old Age Assistance and Aid to the Permanently and Totally Disabled.

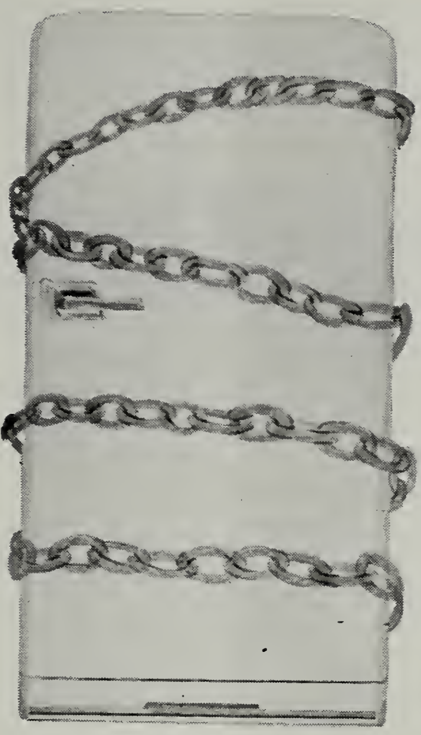
Legislation enacted by the 72nd General Assembly, which became effective last October, provided for certain drugs and dental services for the aged and disabled. Proctor N. Carter, Director of the Division of Welfare, reported that at the present time there are 843 drug stores participating in the program, that 735 dentists are participating and that 54 physicians who dispense drugs, principally in areas where there are no pharmacies, also are cooperating. He said that there are no pharmacies in Scotland, Osage, Maries, St. Clair and Hickory but that three of the counties have physicians who dispense drugs.

Senator William J. Cason, Chairman of the Senate Committee on Public Health and Welfare and a member of the Advisory Committee, asked Mr. Carter to submit a report early in March as to the status of the program and money to finance it so that a decision could be made as to expansion of the services.

Large Number Get First and Second Polio Vaccine

An unexpected number of persons, estimated at 625,000 received their first or second polio vaccine dosage at 174 clinics in St. Louis and St. Louis County and 31 in St. Clair County (Illinois) the last Sunday in January.

A similar series of clinics were held in that area in November but the number attending the second one indicated that many were receiving their first dose. Another clinic is planned for later if it appears that many received their first dose at the January clinic.



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Side effects: Insomnia may occur if taken later than 6 hours before retiring. The usual peripheral actions of sympathomimetic amines (vasoconstriction and acceleration of the heart) are minimal and little noticed on low or moderate dosage.

Contraindications and precautions: Should not be used in patients with myocardial degeneration, coronary disease, marked hypertension, hyperthyroidism, insomnia or a sensitivity to ephedrine-like drugs. Moderate hypertension in the obese is not necessarily a contraindication since it may be relieved as the overweight is reduced.

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Missouri Academy of General Practice

A board meeting of the MAGP was held at the Missouri Hotel in Jefferson City on Sunday, January 19, with Chairman Walter T. Gunn of St. Louis presiding. Reports were received from various committees, namely: Education, Membership, Public and Professional Relations, Mental Health, Publication, National Defense and Finance.

Actions taken by the Board included:

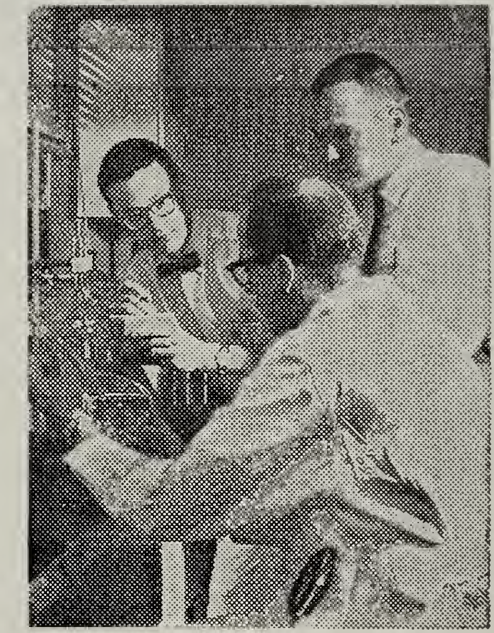
Voted six active members to active-exempt membership status; voted to reelect for another three year membership period three members on the basis of satisfactory study credits submitted; voted to drop two members for failure to submit satisfactory postgraduate study credits; voted to membership eight applicants, including five for active and three for associate. The Board approved Public and Professional Relations Committee participation in a luncheon and program for the junior medical students at the University of Missouri on May 20, during the Spring Clinical Conference at M. U. Medical School.

They voted to convene the 1965 Annual Scientific Assembly of the Missouri Academy in St. Louis and the 1966 assembly in Kansas City.

They took under consideration a proposed resolution to be presented at the 1964 AAGP Congress of Delegates meeting which would amend the new "1964 definition of acceptable continuation study credits" adopted at the 1963 AAGP Annual Session and became effective January 1, 1964; also voted to hold the next board meeting in Columbia on Wednesday night, May 20.

A number of speakers have already accepted invitations to appear on the two-day Annual Session Program of the MAGP to be held at the Chase Hotel, in St. Louis, on Saturday and Sunday, October 31 and November 1, 1964.

Academy President Edson C. Carrier of Kansas City informed the Board that the featured speaker for the President's Installation dinner meeting on Saturday night, October 31, will be Richard C. Bates, M.D., Lansing, Michigan. His subject will be, "How to Have a Heart Attack." Dr. Bates makes over a hundred speeches a year throughout the United States and this topic is a favorite one.



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Woman's Auxiliary

Recently, I received a reprint of an article on "Medical Education Loans" from the January 4 *Journal of the AMA.* There has been some concern this year as to what effect the Health Professions Educational Assistance Act of 1963, PL 88-129, would have on AMAERF. The article answers some of the questions that have been raised. A total of 11,500 commercial bank loans for medical students, interns and residents have been secured and nearly $14 million has been loaned with a demand of nearly 20 per cent more over the comparable period of the previous year.

Mrs. L. S. Crispell

The report emphasized the current need for additional funds for the AMAERF and outlined the difference between the two programs. Under the federal loan program, capital is provided for loans to students of dentistry, medicine and osteopathy and the money must be paid back within three years following completion of school; schools are required to put up $1 for every $9 allocated by the government and are responsible for collections; the maximum loan is $2,000 a year and a school shall give preference to persons who enter as a first year student; and finally, the funds cannot be used in combination with those of the National Defense Education Act.

AMAERF loans money to medical students, interns and residents up to $1,500 a year and up to $10,000 for an entire training period with no payments required until five months after completion of all full-time training, including internship and residency; medical schools and hospitals are not required to put up matching funds or to make collections. Though the federal program charges less interest, the big difference is that the taxpayer pays the bill. "Medical students must undergo a long and difficult training period. At the end of that period, however, they have every prospect of earning an above-average income. The AMA believes that they are thereby well equipped to borrow as responsible individuals and without public subsidy. This belief is the cornerstone of the AMAERF Loan Program and it will remain firmly in place."

This year, under the national theme of "Serve and Communicate" our auxiliaries have compiled an enviable record of accomplishment. Almost every group has made a special effort to prove their concern for their communities in some way. As in other years, a cup will be awarded at the convention to the auxiliary that has earned the most points. Out convention guests will be Mrs. C. Rodney Stoltz, the National President, and Mrs. Paul Gray, President of the Southern Auxiliary, who will both bring greetings.

A great many people are responsible for the success of this year. My officers, directors, committee chairmen, county presidents and other appointees have all been most helpful; the Past Presidents have given invaluable guidance and counsel; the MSMA staff has cooperated in every way possible; and we are especially indebted to the president of MSMA, Dr. Kenneth C. Hollweg, and to the other Medical Advisors, Dr. Durward G. Hall, Dr. J. Martyn Schattyn, Dr. W. Russell Smith and Dr. Vernon E. Wilson, for their interest and understanding. I am grateful to all of these people and to all of the members for their support.

In a few days, I shall turn the gavel over to my successor, Mrs. Delevan Calkins of the St. Louis City Auxiliary. Everyone will appreciate her friendliness, warmth and charm as well as her ability to administer Auxiliary affairs. I know Bitsy will receive the same wonderful cooperation and loyalty that I have.

It has been a pleasure to serve as president of the Auxiliary—not always easy, but always a challenge and now a most cherished memory of the fine women throughout the state who contributed their time and thought in so many ways to the record of my year. Thank you.

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MANFRED THURMANN, M.D.; J. GERARD MUDD, M.D.,
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Intracardiac Electrograms in Congenital Heart Disease

An investigation to determine whether intracardiac electrograms are of value in the differential diagnosis of congenital heart disease is reported. The work was supported by the Missouri Heart Association.

Dr. Thurmann was Research Fellow of the Missouri Heart Association; Dr. Mudd is Associate Professor of Medicine, and Dr. Janney is Associate Professor of Clinical Medicine, all at St. Louis University School of Medicine.

Intracardiac electrography has been used to study the normal activation of the heart,[1, 2] right and left bundle branch block,[3, 6] the Wolff-Parkinson-White Syndrome[7] and supraventricular and ventricular arrhythmias.[8] Only a few studies have dealt with congenital heart diseases,[1, 10] the most contributory being in the diagnosis of Ebstein's anomaly. [11] The purpose of this investigation is to determine whether intracardiac electrograms are of value in the differential diagnosis of congenital heart disease.

Material and Methods

Intracardiac electrograms were obtained on 50 patients by right heart catheterization. Their average age was 9.4 years ranging from 2 weeks to 56 years (table 1).

The intracardiac electrographic procedure was carried out immediately after the standard right heart catheterization and cineangiography. Pressures and standard electrocardiograms were recorded and used for comparison. A number 5 Cournand electrode-catheter was introduced into the heart through the saphenous vein. The position of the catheter was confirmed at each tracing taken by fluoroscopic observation, pressures and saturations. Electrograms were taken with the catheter in five locations: low right atrium at the level of the diaphragm, mid right atrium, high right atrium near the superior vena cava,

TABLE 1
AGE OF PATIENTS CATHETERIZED

Age	*No. of Pts.*
Under 6 mos.	13
6 mos. to 1 yr.	4
1- 5 yrs.	11
5-10 yrs.	9
11-20 yrs.	5
21-30 yrs.	4
30-60 yrs.	4
Total	50

mid left atrium and right ventricle. Pullback tracings were often obtained on withdrawal of the catheter from the right ventricle or left atrium into the right atrium.

A Sanborn Twin Viso electrocardiographic direct writer was utilized for recording, one channel for the intracardiac electrogram and the second for standard lead III. All the electrograms were standardized in the usual manner.

The nomenclature used to describe the components of the atrial electrogram is that advocated by Hecht,[12] which consists of placing a P before the letters indicating the positive and negative deflections. Small and capital letters are used according to the relative magnitude of the deflections, thus Pqrs, PRS.

Any of the following constituted standard electrocardiographic criteria for the diagnosis of right ventricular hypertrophy: an R in V_1 of 7 mm. or more, an S in V_1 of 2 mm. or less, an R/S ratio in V_1 of more than 1, a total of R height in V_1 plus S depth in V_5 or V_6 of more than 10.5 mm. and/or the presence of a right axis deviation.[15]

Left atrial enlargement was diagnosed when the frontal P vector was greater than its normal average orientation of +60°, the P waves in I and AVL were of more than 0.11 sec. duration with a double-peaked or flattened summit and/or large biphasic or downwardly directed P waves were present in V_1 and V_2.[3, 15]

Right atrial enlargement was considered to be present when the frontal P vector was less than its average normal orientation of +60° and/or tall, peaked P waves of 2.5 mm. amplitude or more were seen in leads II, III and AVF.[3, 15]

The largest deflections of the electrocardiographic complexes were measured in millimeters in the different locations.

The following data were analysed:

a. Configuration and amplitude of the QRS complex in the right ventricle.

b. Configuration and amplitude of the P and QRS complexes in the atria.

c. Abnormalities of the PTa (auricular T wave) and ST segments.

d. Arrhythmias.

e. Relationship between standard elctrocardiographic diagnosis of right artial enlargement and atrial pressures and atrial intracavitary complexes.

f. Relationship between standard electrocardiographic diagnosis of right ventricular hypertrophy and right ventricular pressures and right ventricular intracavitary complexes.

RESULTS

Table 2 shows the diagnosis in the 50 cases and table 3 shows the configuration of the P and QRS complexes in the atria and of the QRS complexes in the right ventricle. The intracavitary complexes were not obtained in the left atrium and right ventricle in all patients due to technical difficulties. As can be seen, the patterns obtained in the various positions of the electrode-catheter are those seen in the activation of normal hearts.[13, 14]

TABLE 2

FINAL DIAGNOSIS OF PATIENTS STUDIED

Diagnosis	
Normal (Functional Heart Murmur)	7
Atrial Septal Defect	5
Ventricular Septal Defect	12
Pulmonary Stenosis	4
Atrial Septal Defect and Pulmonary Stenosis	2
Atrial Septal Defect & Patent Ductus Arteriosus	1
Aortic Coarctation	1
Atrial Septal Defect (Ostium Primum)	1
Primary Pulmonary Hypertension	2
Atrio-Ventricular Canal	1
Ventricular Septal Defect & Pulmonary Stenosis	6
Atrial Septal Defect, Ventricular Septal Defect and Pulmonary Stenosis	1
Endocardial Fibroelastosis	2
Ebstein's Anomaly	1
Partial Anomalous Venous Return into Superior Vena Cava	1
Atrial Septal Defect and Total Anomalous Venous Return into Coronary Sinus	1
Dextroposition with Absent Right Upper and Middle Pulmonary Arteries	1
Pectus Excavatum	1
Total	50

The analysis of the PTa segments and ST segments showed an elevation of the PTa segment in the right atrium in seven patients and an elevation of the ST segment in the right ventricle in four patients. These changes were due to pressure of the electrode-catheter on the endocardium as they subsided immediately when the electrode-catheter was pulled back from the place at which it was pressing on the endocardium. Simultaneous changes of the ST and PTa segments were not seen in standard lead III. These changes were produced accidentally and no attempt was made to produce them in the other patients studied.

The following arrhythmias were observed: one patient had one atrial premature contraction

TABLE 3

TYPES OF INTRACARDIAC COMPLEXES

	Atrial Complexes in R.A.			*Ventricular Complexes in R.A.*			*Atrial Complexes in L.A.*	*Ventricular Complexes in L.A.*	*Ventricular Complexes in L.A.*
	LOW	MID	HIGH	LOW	MID	HIGH			
PRs	4						2		
PRS	2	4	8				4		
Prs	26	9	3				2		
PrS	7	27	11				7		
Pr	7	1	1				2		
PQS	4	8	25				1		
Prsr		1	1						
PqR			1						
rSR				7	9	17		1	2
rSRS				1		1			
rSr				5	6	3		1	3
rS				4	2	4		7	25
rSrr				1	2	1			
rSRs				1					
qR				6	9	4		1	
QR				17	7	10		3	
Qr				2	7	5			
QS				3	6	4		2	
qrr				1	1	1			
qrSr				1	1				
Qrs				1				1	
qRS								2	
RS									4
rsrs									1
Total	50	50	50	50	50	50	18	18	35

RA = right atrium
LA = left atrium
RV = right ventricle

(APC) with the catheter in the right atrium and one patient developed a run of six with the catheter in the same location. One patient had one APC while pulling back the catheter from the left atrium to the right atrium and one APC was produced in another patient while pulling the catheter back from the right ventricle to the right atrium.

Nine patients developed ventricular premature contractions (VPC). One had a short run of ventricular tachycardia while introducing the catheter into the right ventricle; one patient had two VPC successively and another, four VPC while pulling the catheter back from the right ventricle to the right atrium. One patient had two VPC successively with the catheter in the right ventricle. Each of these four patients had their arrhythmias after a short period in which the ST segments were elevated. The five other patients had one VPC while the catheter was pulled back from the right atrium to the right ventricle.

Table 4 shows the relationship between the electrocardiographic diagnosis of atrial enlargement, the mean atrial pressure, the P voltage in millimeters and the age of the patient. Six patients had electrocardiographic evidence of right atrial enlargement. Their average right atrial mean pressure was 4.5 mm. Hg and their average intracavitary P wave voltage was 15 mm. Forty-four patients with no evidence of right atrial enlargement had an average mean right atrial pressure of 1.9 mm. Hg and an average P wave voltage of 9.6 mm. The findings obtained in the right atrium and right ventricle bore no relation with the age of the patient.

Table 5 shows the relationship found between the electrocardiographic diagnosis, the age of the patient, the right ventricular pressure and the QRS voltage in the right atrium and ventricle. Right ventricular pressures above 35 mm. Hg were considered to be definitely above normal. Thirty-one patients had an average systolic right ventricular pressure of 73.3 mm. Hg. The aver-

TABLE 4
CORRELATION OF THE RIGHT ATRIAL PRESSURES AND INTRA-ATRIAL P WAVE VOLTAGES WITH THE PRESENCE OR ABSENCE OF RIGHT ATRIAL ENLARGEMENT

	P Voltage in Atrium (mm.)	*Right Atrial Mean Pressure (mm. Hg)*	*Age in Years*
Without electrocardiographic right atrial enlargement.	30	0	10
	30	1	51
	27	0	19
	25	1	19
	20	1	7
	18	0	3
	17	0	10
	15	3	2/3
	14	2	52
	14	3	1/6
	12	1	3
	12	4	1/6
	11	1	1 1/2
	10	1	10
	10	2	25
	10	0	7
	8	1	2/3
	8	0	2
	8	1	22
	8	1	6
	7	0	4
	7	2	2
	7	7	3
	6	4	3
	6	0	13
	6	1	11
	6	0	1/12
	6	10	19
	6	2	1/2
	6	4	5
	5	7	30
	5	5	5
	5	2	1/8
	5	3	2
	5	1	11/12
	4	2	1/6
	4	0	2/3
	4	3	22
	4	1	56
	4	2	1/12
	3	1	5
	3	2	1/6
	3	1	1/2
	2	1	1/3
Average	9.6 mm.	1.9 mm. Hg	
R.A.E. With E.C.G.	20	1	1/24
	18	0	1/24
	16	8	20
	15	9	4
	13	8	1/12
	8	1	6
	15 mm.	4.5 mm. Hg	

age maximum QRS voltage in the right atrium was 23 mm. and in the right ventricle 54 mm. Thirty-one of these patients had an electrocardiographic diagnosis of right ventricular hypertrophy, six had incomplete right bundle branch block and one had complete right bundle branch block.

Nineteen patients had right ventricular pressures below 35 mm. Hg, averaging 27 mm. Hg (table 6). The average QRS voltage in the right atrium in this group was 18 mm. and in the right ventricle was 35 mm.

RIGHT ATRIAL COMPLEXES

The variable morphology of the right atrial complexes from tracing to tracing in individual patients is attributed to difference in the position of the catheter in relation to the direction of the atrial depolarization and to the distance of the catheter tip from the sino-auricular node. When the catheter tip is close to the sino-auricular node the electrical impulse travels away from the electrode, giving, therefore, mainly negative complexes of the PQr and PrS type. The configuration of the atrial complexes varied with the position of the catheter in the right atrium, but not in relation to the presence of ordinary electrocardiographic evidence of atrial enlargement nor the mean atrial pressure. A direct relationship was found between the average of the right atrial mean pressure and the average of the voltage of the intracavitary P wave, that is, the higher the pressure the greater the amplitude of the P wave and vice versa (table 4). This relationship was not always seen in the individual cases. In the lower levels of the atrium the complexes were mainly of the Prs type and in many instances resembled the P waves obtained in standard lead III.[16, 17]

The observation[3] has been made that W shaped P waves in the right atrium are rarely found in normal cases, but usually in atrial enlargement or dilatation. These changes in the P waves are attributed to the separate activation of each atrium.[3] Four of our cases had W shaped P waves, two had primary pulmonary hypertension, one with right atrial enlargement by the standard electrocardiogram. One patient had a coarctation of the aorta and the other an atrial septal defect.

Zimmerman[18] mentions that negative deflections often occur in the lower levels of the right atrium when it is hypertrophied or dilated, being produced by the activation of the hypertrophied right atrial appendage. We found four cases with negative atrial complexes at the low

TABLE 5

CORRELATION OF ECG DIAGNOSIS AND QRS VOLTAGES IN THE RIGHT ATRIUM AND VENTRICLE IN PATIENTS HAVING ELEVATED RIGHT VENTRICULAR PRESSURES

	ECG Diagnosis	*Right Ventricular Pressure (mm. Hg)*	*QRS Voltage (mm.) Right Atrium*	*QRS Voltage (mm.) Right Ventricle*	*Age (yr.)*
1.	RVH	35/0	12	90	2/3
2.	RVH IRBBB	36/0	15		5
3.	RVH LVH	40/0	35		1/6
4.	RVH	40/0	14	35	1/12
5.	IRBBB	42/0	8	17	47
6.	RVH	50/0	32	50	6
7.	RVH LVH	54/0	18		1/12
8.	RVH	55/0	15	80	1 1/2
9.	IRBBB RVH	56/0	20	15	4
10.	RVH	62/0	13	40	3
11.	RVH LVH	62/0	100	54	1/6
12.	RVH LVH LAE	62/0	43	48	6
13.	RVH RAE	63/10	25		1/12
14.	RVH	65/0	15	80	3
15.	RVH LVH	65/0	30	60	3
16.	RVH	70/0	30	50	10
17.	RVH	70/0	20		1/11
18.	RVH	72/0	20	50	11
19.	RVH LVH	75/0	60	90	1/8
20.	IRBBB	78/0	12		56
21.	RVH LVH	78/0	20	60	1/2
22.	RVH LVH	80/0	25	38	8
23.	RVH	83/0	10		2
24.	RVH CRBBB	85/18	10		19
25.	RVH	100/0	10	80	5
26.	RVH	100/0	20	70	2
27.	RVH LVH	101/0	60	70	2/3
28.	RVH	105/0	12		18
29.	IRBBB LAE RAE	108/0	20		1/6
30.	RVH IRBBB	145/0	30		25
31.	RVH	200/0	13		30
		Aver. 73.3 mm. Hg	Aver. 23 mm.	Aver. 54 mm.	

RVH = right ventricular hypertrophy
LVH = left ventricular hypertrophy
IRBBB = incomplete right bundle branch block
WNL = within normal limits
CRBBB = complete right bundle branch block
RAE = right atrial enlargement
LAE = left atrial enlargement

level, only one of which had electrocardiographic right atrial enlargement.

The most frequent ventricular complexes in the right atrium were of the QR, QS and rsR type regardless of the type of congenital heart disease. These are the complexes that were also found in the normal cases, and correspond to normal septal and ventricular depolarization. In 12 cases of electrocardiographic right ventricular hypertrophy the complexes registered at all levels in the right atrium were of the QR and qRS type which is similar to what has been observed by others.[3, 18] Even though no diagnostic criteria could be established, which would assure the presence of right ventricular hypertrophy, it was found that the average of the right ventricular pressures had a direct relationship to the average of the QRS voltages, registered in the right atrium; that is, the higher the pressure, the greater the voltage and vice versa. This relationship was not always seen in the individual cases.

TABLE 6

CORRELATION OF ECG DIAGNOSIS AND QRS VOLTAGES IN RIGHT ATRIUM AND VENTRICLE IN PATIENTS HAVING NORMAL PRESSURES IN THE RIGHT VENTRICLE

	ECG Diagnosis	*Right Ventricular Pressure (mm. Hg)*	*QRS Voltage (mm.) Right Atrium*	*ORS Voltage (mm.) Right Ventricle*	*Age, Years*
1.	WNL	20/0	39	45	2
2.	RVH	21/0	20	46	11/12
3.	WNL	22/0	22	24	19
4.	WNL	25/0	20	48	2/3
5.	WNL	25/0	12	24	4
6.	WNL	25/0	15	40	5
7.	WNL	25/0	8	40	22
8.	1st° AV Block	25/0	19	36	3
9.	WNL	26/0	15		7
10.	IRBBB	26/0	15	35	7
11.	RVH	27/0	32		1/6
12.	LVH	28/0	27	40	1/2
13.	IRBBB	30/0	12		13
14.	WNL	30/0	15	50	1/3
15.	IRBBB	30/0	10		22
16.	WNL	31/0	22	40	3
17.	WNL	32/0	18	29	10
18.	WNL	32/0	20		51
19.	WNL	34/0	10	19	52
		Aver. 27 mm. Hg	Aver. 18	Aver. 35	

Left Atrial Complexes

The atrial complexes registered in the left atrium were similar to those seen in the middle and low levels of the right atrium. The ventricular complexes were of the QS and Qr type.

Right Ventricular Complexes

In the right ventricle the rS pattern predominated, which had been found by others.[1, 3, 18-21] Table 5 shows the average voltage in millimeters of the QRS complex in the right ventricle in relation to the right ventricular pressures. In individual cases, no consistent relationship could be found between the right ventricular pressures and the voltage of the QRS complex nor with the electrocardiographic diagnosis, but a direct relationship was found between the average right ventricular pressure and the average voltage of the intracavitary QRS complex; the higher the pressure the greater the amplitude. Large amplitudes of the intracavitary ventricular complexes have been considered as evidence of right ventricular hypertrophy.[2] As can be seen, in table 5, 13 of 28 cases, 46 per cent, with standard electrocardiographic right ventricular hypertrophy showed QRS voltages of 50 mm. or more in the right ventricle and four of 28 cases (16 per cent) showed QRS voltages of 40 mm. or more in the right atrium. QRS heights above 40 mm. in the right atrium and above 50 mm. in the right ventricle always correlated with right ventricular hypertrophy. Of 31 cases with right ventricular pressures, above 35 mm. Hg, 28 (90 per cent) showed standard electrocardiographic evidence of right ventricular hypertrophy.

As observed by others,[2, 3] the pressure of the electrode-catheter on the endocardium produced elevations of the PTa segment in the atria and of the ST segment in the ventricle but no slurring of the upstroke of the P wave was detected. No changes were observed in the ST segment of the simultaneously taken lead III, indicating that the changes in the intracardiac recording are due to pressure on a small area of endocardium caused by the tip of the catheter. It is interesting to note that four cases developed short runs of ventricular premature contractions after the periods of ST elevations. In the case of Ebstein's anomaly a marked elevation of the PTa segment was seen at the high level of the enlarged right atrium. The changes in the ST segment in the lower portion of the right atrium close to the misplaced tricuspid valve as reported by Hernandez[11] were not seen, probably because the catheterization was performed through the saphenous vein and therefore no pressure was produced on the lower portion of the large right atrium.

The use of intracardiac electrography as a means of determining catheter position[9, 10, 14, 22] is not of greater value than the direct fluroscopic observation and pressure curve determination.

SUMMARY

Fifty intracardiac electrograms were analyzed to establish a correlation with the different types of congenital heart diseases. The following conclusions were derived:

1. The intracardiac electrocardiographic tracings showed the atrial and ventricular complexes in the different positions to be similar and not distinct from those found in normal hearts.

2. No correlation could be established which is of value in the differential diagnosis of congenital heart disease.

3. Injury patterns were seen corresponding to pressure of the catheter tip on the endocardium. These were not seen on the simultaneous standard electrocardiogram.

4. Intracardiac electrography was not considered of greater value than fluoroscopy or pressures in determining the position of the catheter within the heart chambers.

5. A direct relationship was established between the average right atrial mean pressure and the P voltage in the right atrium. The same relationship was also established between the average right ventricular pressure and the QRS voltage in the right ventricle.

6. A good correlation was found between the standard electrocardiogram and the data obtained with the intracardiac electrode and catheter with the routine catheterization data.

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Autoimmune Disease and Thyroid Autoantibodies

This review presents evidence that some diseases of the thyroid gland are based on autoimmune mechanisms as their etiologic agent.

This is one of a series of seminars presented to the Medical House Staff, Jewish Hospital, St. Louis, edited by Michael M. Karl, M.D., Acting Director, Department of Medicine of the hospital.

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I. AUTOIMMUNITY

THERE HAS BEEN an increasing interest in the concept of autoimmune disease in recent years. A multitude of immunoglobulins have been isolated and identified in the serum of patients with a wide variety of diseases such as the antinuclear factor in systemic lupus erythematosus, the rheumatoid factors in rheumatoid arthritis, the antithyroid antibodies in Hashimoto's struma and many others. There is an overlap in the clinical features of the connective tissue or collagen diseases as well as a similar overlap in the humoral autoantibodies of these diseases.

Some investigators have postulated that some individuals have an unusual sensitivity of their immune apparatus to autoimmunization. The fact that these diseases may be familial also lends support to the concept that some basic immunologic difficulty may exist. It has also been shown that family members of a patient with autoimmune disease may have various autoantibodies even though the individual is clinically well.

The concept of autoimmunity and antibodies dates back only to 1900 with the first experiments of Ehrlich and Morgenroth who injected goats with red blood cells of other goats to form isoantibodies to the injected red blood cells. Today, there are two concepts in regard to the type of antibodies formed; the humoral autoantibody and the delayed or cellular autoantibody. There is experimental and clinical evidence that the humoral autoantibody can produce lesions only when the antigens are readily available, such as cells in suspensions (erythrocytes, leukocytes), vascular endothelium and certain vascular basement membranes. The humoral autoantibodies are unable to produce lesions in solid tissues such as thyroid, which suggests that the antibody cannot react with the antigen containing cells in the circulation due to barriers either in the vessel wall or in the organized tissue.

In the case of the delayed or cellular antibody, lesions may be produced in a variety of solid vascularized tissues that give rise to inflammatory and destructive lesions in the antigen-containing tissue. This is best shown by the successful passive transfer with living lymphoid cells as shown by experimental auto-allergic thyroiditis. The inflammatory reaction in the solid tissues has morphologic characteristics compatible with delayed hypersensitivity reactions.

A. *Criteria for Autoimmune Diseases.*—In 1957, Witebsky and coworkers proposed four criteria to consider a disease an autoimmune disorder:

1. The direct demonstration of free, circulating antibodies that are active at body temperature or of cell-bound antibodies by indirect means.
2. The recognition of the specific antigen against which this antibody is directed.
3. The production of antibodies against the same antigen in experimental animals.
4. The appearance of pathologic changes in the corresponding tissues of an actively sensitized experimental animal that are basically similar to those in human disease.

A fifth criterion has been contemplated: The successful transfer of the disease by an antibody-containing serum or by immunologically stimulated lymphoid cells.[2]

B. *Comparison of Two Categories of Auto-Immune Disease.*—The two basic ways in which autoantibodies can be evoked, namely by breakdown of immunologic tolerance or by release of secluded antigens, appear to underlie two broad categories of spontaneous antoimmune diseases. It is visualized that the effectors of an abnormal immune response, i.e., the sensitized lymphocytes and the circulating antibodies, possibly acting in synergism with each other, are capable of giving rise to destructive inflammatory lesions in the tissues containing the relevant auto-antigens, and that when the conditions are suitable this can lead to a progressive disease which derives some of its momentum from the continued release of further stimulating antigen from the affected tissue cells.

TABLE 1

COMPARISON OF TWO CATEGORIES OF AUTO-IMMUNE DISEASE

"Disturbed-Antigen" Disease	*"Disturbed-Tolerance" Disease*
Exemplified by Lymphadenoid Goitre	Exemplified by SLE
Differences	
Antigen not normally circulating.	Antigen accessible to lymphoid cells.
Immune tolerance to antigens probably not established.	Tolerance to antigens established in early life.
Organ-specific antibodies produced in patient.	Antibodies not necessarily organ-specific.
Antibodies have narrow species-specificity.	Antibodies have wide species-specificity.
Narrow spectrum of antibodies produced.	Often a wide variety of antibodies in patient's serum.
Antigens capable of evoking antibody response in healthy animals.	No antibodies produced in animals with comparable stimulation.
Experimental lesions resemble human disease.	Human disease difficult to reproduce in animals.
Relatives of patient have tendency to several thyroid diseases.	Relatives have disturbances of -globulin synthesis.
Similarities	
Circulating auto-antibodies to normal body constituents.	
Tendency to raised level of serum -globulin.	
Lymphoid invasion of affected organs.	
Variable damage to cells containing auto-antigens.	
Greater incidence in women.	
Disease process not always progressive (cf. discoid LE and focal thyroiditis).	
Circulating antibodies not primarily responsible for tissue damage (except presumably in haemolytic anaemia), but may act synergistically with "delayed type" hypersensitivity reactions.	

Reproduced from Hijimans, Doniach, Roitt and Holborow: 1961, Brit. Med. J. ii, 909.

In the "disturbed antigen" disease relevant organ constituents are considered inaccessible to the lympho-reticular system and so fail to establish immunological tolerance in early life. In contrast, the antigens characteristically involved in SLE are widely distributed in the body components as is the case of the DNA protein and even present in the antibody forming cells themselves; therefore, tolerance to them must be presumed to exist in normal states.

II. THYROID AUTOANTIBODIES

A. *History.*—When the animal body is confronted with foreign proteins or other materials, an immunological response is provoked in the lymphoid tissue leading to the production of specific circulating antibodies. In 1900, Ehrlich and Morgenroth[4] came up with the concepts of hetero-antibody, iso-antibody and autoantibody which referred to (1) antibodies formed by injection of substances from different species, "hetero-antibody" (2) antibodies produced by injection of substances from other members of the same species, "iso-antibody," and (3) antibodies acting upon the constituents of an animal's own body, "autoantibody." However, these investigators felt that the individual would not produce antibodies against his own tissues and formulated the principle called horror autotoxicus. However, this principle was to be later disproved by Rose and Witebsky.

The next work was done by Uhlenhuth[5] in 1903 when he demonstrated organ specific autoantibodies in animal experiments using bovine lens as the antigen which was followed up with experiments showing similar organ specific antigens in brain tissue, spermatozoa and extracts of thyroid glands. In 1928, Witebsky and Steinfeld injected rabbits with bovine brain intravenously, which resulted in the appearance of organ specific antibodies which reacted selectively with brain antigens. The first report of circulating antibodies in the serum of patients with thyroid disease was that of Papazolu[6] in 1911 who described a positive complement fixation reaction between the serum from hyperthyroid subjects and an extract of the thyrotoxic gland. In 1923, Hektoen[7] and his associates produced precipitating antibodies to thyroid extracts in animals by injecting extracts of homologous and heterologous thyroid glands intravenously into rabbits, and organ specificity, but not species specificity, was demonstrated in that the antisera would react only with extracts of thyroid glands from various species and not with extracts of other glands. Except for Lerman's[8] work in 1942 when he found that immunization of rabbits with human thyroglobulin led to the formation of antibodies not only against human thyroglobulin but also against rabbit thyroglobulin there was little further progress made until 1955.

Witebsky, Rose and Shulman[9] in 1955 initiated the resurgence of interest in thyroid antibodies by immunizing rabbits with extracts of their own or other thyroid tissue added to Freund's adjuvant (mineral oil and killed bacteria) with the production of autoantibodies in the blood of the rabbits, as well as frequently producing histologic changes in the thyroid glands suggestive of changes seen in Hashimoto's disease. The antibodies produced were subsequently tested for by the precipitin, complement fixation and the tanned red cell hemagglutination technics, and these antibodies were shown to be organ specific and relatively species specific. By their work, Rose and Witebsky challenged a fundamental concept of immunology, namely, that an animal cannot produce an autoantibody against any of its own protein.

At the same time, the finding of an abnormal elevation of gamma globulin and the subsequent abnormality of serum flocculation tests (CCF, TT) in patients with Hashimoto's disease led Roitt, et al.[10] to suspect a long continued autoimmune reaction. They found that a precipitate developed when the serum from a patient with Hashimoto's disease reacted with an extract of human thyroid gland and this suggested to them that the serum contained antibodies to a constituent of the human thyroid.

B. Types of Thyroid Antibodies.—The principal autoantibodies known to be found in Hashimoto's disease and methods used to detect them are shown in Table 2.[11]

TABLE 2

PRINCIPAL AUTOANTIBODIES IN HASHIMOTO'S DISEASE

Autoantigen	*Tests for Autoantibody*
Thyroglobulin	Precipitin Tanned-red cell agglutination Coons technic on fixed sections Passive cutaneous anaphylaxis
Colloid component other than thyroglobulin	Coons technic on fixed sections
Intracellular microsomal antigen	Complement fixation Coons technic on unfixed sections Cytotoxic effect of serum on tissue-culture thyroid cells
Nuclear component	Coons technic on unfixed section

1. Thyroglobulin Antibody

In 1957, the first report was made by Witebsky[12] who demonstrated that 12 of 18 patients were found to have circulating antibodies against human thyroid extract in people with the diagnosis of chronic thyroiditis. It was later shown that serum of patients with Hashimoto's disease, if mixed with crude or fine extracts of human thyroid gland, would give precipitin reaction. The precipitin titers were found to be the highest in the untreated patients; and the titers were lower in those treated with thyroid. These precipitating antibodies to the thyroglobulin, which is the active antigen, can easily be detected by Ouchterlowy's technic of agar-gel diffusion. Doniach, Roitt and others[13, 14, 15] have extensively studied the precipitin system and fractionation of the Hashimoto serum by zone electrophoresis, followed by precipitin tests on the eluted fractions, showed that the antibody was located exclusively in the gamma globulins, and this was confirmed by immuno-electrophoresis in agar.

An equally specific but much more sensitive method is the tanned-red-cell agglutination test whereby thyroglobulin is adsorbed on the surface of red cells that have been treated with dilute tannic acid and agglutination of these cells occurs in the presence of antibody to thyroglobulin. By this method antibody can be detected at a concentration 40,000 times less than that required for a positive precipitin reaction. These antibodies were not of the cold agglutinin type inasmuch as the hemagglutination reaction occurred at 37 C., as well as room temperature.

Coon's fluorescent antibody technic has been applied to the study of the antigen-antibody reaction in the thyroid gland. In the original method, an antibody solution of high titer is conjugated with fluorescein isocyanate, and the resultant fluorescent-antibody solution is then employed as a specific histo-chemical stain on tissue sections. Whenever antigen-antibody precipitates form, the fluorescent antibody is fixed, and examination of the section under the fluorescent microscope reveals a brilliant yellow-green color.

In the technic of passive cutaneous anaphylaxis, intradermal injection of human thyroid extract into Hashimoto's patients produced erythema and induration which was maximum at 24 hours, and usually occurred in the patients with precipitins.[16] Another test of passive cutaneous anaphylaxis is shown by the intradermal injections of serum at varying dilutions into the skin of a guinea pig, and later the animal is challenged with an intravenous injection of the antigen (thyroglobulin) solution mixed with Evans-Blue Dye.[17] The diffusion of the blue dye into the skin indicates the reaction of thyroglobulin with antibody in the injected serum within a few minutes. It is not clear whether these cutaneous reactions should be interpreted as Arthus' phenomena or as manifestations of the "tuberculin type" hypersensitivity, since a late appearance of maximum response is also observed in severe Arthus reactions.

2. COLLOID COMPONENT OTHER THAN THYROGLOBULIN

In some patients studied by White[18] using the gel-plate diffusion, it was found that certain Hashimoto sera gave two precipitation lines with the thyroglobulin, probably implying two molecular species in the thyroglobulin which have certain antigenic determinants in common. The evidence obtained for the presence of a colloid autoantigen other than thyroglobulin is that in certain patients with Hashimoto's disease with raised flocculation tests and high gamma globulins, but with no thyroglobulin or complement-fixing microsomal antibodies, the colloid of thyroid sections stained by the Coon's technic gives a pattern distinct from that obtained with the thyroglobulin precipitins. The presence of incomplete antibodies to thyroglobulin was excluded by co-precipitation studies with I^{131} thyroglobulin, antigamma globulin serum, and tests for blocking antibody.[16] Anderson, et al.[19, 33] have reported that nine of 53 patients with Hashimoto's thyroiditis had a complement-fixing antibody directed against thyroglobulin by utilizing immunoelectrophoretic technics and differential absorption technics to separate the antibodies and showed thyroglobulin as the antigen. Other investigators have had trouble demonstrating this complement-fixing antibody to thyroglobulin.

3. INTRACELLULAR MICROSOMAL ANTIGEN

The first complement fixation (CF) reaction to thyroid extract was shown by Papazolu[6] in 1911 when the sera of patients with thyrotoxicosis reacted with extracts of thyrotoxic thyroid glands. Trotter, et al.[20] reported that most patients with Hashimoto's disease have a distinct immune system in which the antibodies fix complement with extracts of thyrotoxic gland as well as in many cases of spontaneous myxedema, some cases of thyrotoxicosis, and occasionally in normal people. The complement fixing antibody is measured by superimposing a hemolytic reaction which also requires complement on the antigen-antibody reaction. If the patient's serum contains complement-fixing antibody, the secondary hemolytic reaction cannot occur, and in the absence of antibody, the RBC is hemolyzed. This is the standard complement-fixation test.

It has been shown that there are two distinct thyroid antigen-antibody systems involved in the precipitation and CF reactions as demonstrated by Roitt and Doniach.[13] This has been shown by the fact that absorption of precipitins from Hashimoto's serum with thyroglobulin has no effect on the serum titer in the CF test. It has also been shown that these two antigens are located at different sites in the thyroid. The thyroglobulin is predominately intrafollicular, and the CF antigen is located intracellularly as shown by the ultracentrifugation with the CF antigen located in the "microsome fraction."[13] The antigen has also been demonstrated in lower activity in the microsomal fraction of normal and nontoxic goiter. The CF thyroid antigen is organ specific and the antibody only cross-reacts with thyroid from closely related species (rhesus monkey, chimpanzee), but has no effect or cross-reaction with liver, kidney or brain.

It has been shown that some patients with thyrotoxicosis have the antibody against CF antigen in high concentration with no thyroglobulin antibody, and vice versa. The Coon's fluorescent antibody technic on unfixed sections showed that the fluorescein-conjugated Hashimoto serum reacted not only with normal thyroid gland, but also with patient's own gland and gives specific staining in the colloid and in scattered thyroid globules within epithelial cells. It has been demonstrated that diffuse cytoplasmic staining corresponds with the presence of complement-fixing microsomal antibody. The staining is inhibited by prior absorption of the sera with thyroid microsomes, but is unaffected by treatment with thyroglobulin.

The CF antigen obtained from thyroid gland homogenates by differential centrifugation shows 90 per cent of the CF activity in the subcellular fractions concentrated in the microsome portion in contrast to the bulk of the thyroglobulin recovered in the supernatant fraction. It appears that the antigenic potency of thyroid cells is related more closely to the functional activity. This has been shown by Roitt and Doniach[13] in a study of patients with hyperfunctioning adenoma in one lobe of the thyroid. The functional activity of the normal lobe is suppressed since the overactive adenoma leads to inhibition of secretion of TSH by the pituitary. In these cases, CF activity of the adenomal was several times higher that that of the normal lobe. However, Anderson, et al.[19, 33] have found high CF activity in hyperplastic thyroids of goitrous cretins with various forms dyshormonogenesis due to enzyme deficiencies; this implies that the antigen is not necessarily related to effective hormone production.

4. Cytotoxic Antibody

It has been shown by Pulvertaft, et al.[21] that sera from patients with Hashimoto's disease have a cytotoxic effect on trypsinized human thyroid cells in tissue culture from patients' own thyroid as well as those from thyrotoxic and nontoxic nodular goiter. The thyroid cells are set up in primary culture in presence of Hashimoto sera and they fail to grow; however, if the cells are cultured from 18 to 24 hours in normal serum and then placed in Hashimoto's sera, the cells are killed. If the cells are grown for 36 hours in normal serum, then the thyroid cells are no longer affected by subsequent exposure to the cytotoxic serum, and it is thought that the thyroid cells gradually acquired some protective coating. The cytotoxic effect is also abolished by heating the serum to 56 C. The cytotoxic constituent has been obtained from Hashimoto sera in which routine tests for thyroglobulin or for CF antibodies were negative, which suggests the cytotoxic factor distinct from these antibodies. Further evidence is that the thyroglobulin precipitating antibody is heat stable, and the cytotoxic antibody is heat labile. However, Hall[11] in his recent article stated that he had a personal communication from Doniach and Roitt, who have evidence that the microsomal CF antibody is identical with the cytotoxic antibody. However, Chandler, et al.[41] recently showed that there was a lack of correlation between the CF antibody and the thyrocytotoxic antibody, suggesting that they are two distinct antibodies.

The cytotoxic factor has been shown to be localized in the gamma globulin (7S size proteins). Although the thyroglobulin antibody and the cytotoxic occur together, high titer tanned red cell or positive precipitins may be present in sera that does not contain cytotoxic factor. However, a close relationship has been shown by Forbes, et al.[25] who showed both the cytotoxic and microsomal CF antibody to be present in 85 of 86 patients. The cytotoxic factor is found to be high in Hashimoto's disease (47/50), thyrotoxicosis (25/35), myxedema and focal thyroiditis. However, 8/91 (9 per cent) of patients without overt thyroid disease had cytotoxic antibodies as well as 34/118 (29 per cent) of close relatives of patients with thyroid disease had the cytotoxic antibody. It has been shown[26] that complement is needed for the activity of the cytotoxic factor. The importance of the cell surface interaction with the antibody is shown by the fact that the antibody combination is restricted to the cell surface until after the addition of complement when the binding of the subcellular elements of the cytoplasm can be observed after the rupture of the cell membrane. Also, although the cytotoxic antibody is found in thyrotoxic patients with mild and focal thyroiditis, this suggests that the presence of the cytotoxic antibody does not imply progressive tissue destruction.

5. Nuclear Component

White,[22] utilizing the Coon's technic, has found the reaction localized to nuclei of the thyroid slice in four out of 25 patients, and later this serum factor was also shown to be fixed by the nuclei of other tissues, and this factor has been shown to be present in up to 10 per cent of patients with Hashimoto's disease.

C. Experimental Autoimmune Thyroiditis.—A circulating thyroid autoantibody was produced by immunizing a rabbit with thyroid extract plus Freund's adjuvant, and this produced in from two to three months varying degrees of infiltration with lymphoid cells and eosinophils around the thyroid follicles. Further studies revealed that the use of purified thyroglobulin produced serum antibodies and histologic changes in rabbits similar to those seen following use of extracts. It was also shown that the lesion present at four weeks in the rat thyroid as confirmed by hemithyroidectomy generally undergoes regression if no further immunizing injections are given.[12] The correlation between the antibody levels and histologic changes in the thyroid glands is not always good, extensive damage occurring in some animals without detectable antibodies and no damage being seen in other animals having a high titer of circulating antibodies.

Rose and Witebsky[27] demonstrated that the thyroid autoantibodies of rabbit, dog, guinea pig and human would cross-react with thyroid extracts of other species as shown by the tanned red cell hemagglutination as well as the gel double diffusion precipitating tests. Therefore, the thyroid autoantibodies, although specific for the thyroid, would cross-react with thyroid extracts of certain other species and suggested the presence of a spectrum of antibodies all specific for the thyroid extract which was presumably thyroglobulin.

D. Factors Predisposing to Thyroid Autoimmunity.—Why should antibodies or delayed hypersensitivity develop to constituents of the thyroid gland? The presence of antibodies directed against the body's own tissue suggests that there is an alteration of the antigen, or that certain barriers between the antigens and the antibody forming tissues have been removed or that the immune mechanism is abnormal. As of now, no abnormality of thyroglobulin has been detected in Hashimoto's disease. A more likely explanation is that the immune process is initiated by abnormal exposure of thyroid antigens.

The theory is that the colloid escapes, which leads to plasma cell reaction which results in antibody formation. The antigen-antibody precipitation then occurs at or within the thyroidal follicles, which leads to additional epithelial damage with more leakage of colloid and the cycle continues.

TABLE 3

FACTORS INITIATING THE AUTOIMMUNE PROCESS

1)
    a) **Virus infection**
    b) **Basement-membrane lesion**
    c) **Genetic defect**
    d) **Thyrotoxicosis**
2) **Abnormality of immune mechanism**

A. Viral infection of the thyroid causes damage to the thyroid cells and transient appearance of autoantibodies in low titer, but progressive lesions of the thyroid gland have not occurred. Also, it seems unlikely that a short period of thyroglobulin release as in viral thyroiditis could lead to a progressive autoimmune process since thyroglobulin is also released transiently after thyroidectomy and RAI, and yet a progressive autoimmune process does not develop.

B. It has been shown that patients with chronic thyroiditis have changes in the basement membrane which consist of smudging, reticulation, vacuolization, loss of normal staining, thinning, reduplications and discontinuities. Stuart and Allan[28] have shown that seven of eight thyrotoxic patients with high antibody titers had extensive basement membrane damage which is focal and consists of fragmentation, bending and duplication of the basement membrane with lymphocytic and plasma cell infiltrates. In 10 patients with Hashimoto's disease and high antibody titers, the changes in basement membrane were more diffuse and more severe. The reason for the leakage of colloid from the follicle is not understood, but the process may be analagous to the escape of protein through damaged glomerular basement membranes in nephritis.

C. Hall, Owen, and Smart[29] have found evidence supporting a genetic predisposition to thyroid autoimmunity by studying families of patients with circulating antibodies. They studied 24 propositi who all had some form of thyroid disease and circulating antibodies, either tanned red cell hemagglutination and/or CF "microsomal" antibody. They found frequency of circulating antibodies among the sibs to be 54 per cent, which is not significantly different from the expected 50 per cent for dominant heritance. It was found that positive serologic findings were more common among the females. Possibly the defect was in the gland itself, allowing contact between the immunity mechanism and substances normally confined to the intracellular or intrafollicular sites; for example, the basement membrane.

D. Patients with thyrotoxicosis seem to have predisposition to thyroid autoimmunity, since two-thirds of these patients have low titers of circulating antibodies. The relation between thyrotoxicosis and thyroiditis must remain speculative, but a common genetic defect may be responsible for both conditions.

E. The incidence of thyroid antibodies has varied from series to series. Hackett, et al.[30] reported an incidence of 18 per cent in 387 mixed medical patients without evidence of thyroid disorder, using the tanned red cell hemagglutination technic. He also found antibodies in 9 per cent of 102 blood donors, and found positive results in 42 of 69 (61 per cent) patients with thyroid disease. Using the CF "microsomal" technic, he found an incidence of 6.8 per cent positive in sera of 486 hospital patients without clinical thyroid disease. Hill[31] studied thyroglobulin antibody in 1,297 patients with normal thyroid in whose age-sex distribution was similar to those patients with myxedema and Hashimoto's disease, and found over 10 per cent of middle aged females have circulating antibodies.

Doniach and Roitt[14] reported the finding of precipitins in 109 of 144 cases of Hashimoto's disease, as well as in a few cases with spontaneous, nongoitrous myxedema and with sub-acute thyroiditis. They also reported[13] an incidence of over 80 per cent antibodies in patients with nongoitrous hypothyroidism, as well as demonstrating antibodies in patients with thyrotoxicosis, simple goiter and carcinoma.[13, 32] There have been numerous surveys in the literature utilizing the various antibody technics in the last six years.[10, 12–14, 16, 19, 20, 23, 34, 35] Roitt and Doniach in 1958[13] reported extensive studies on several hundred cases with various thyroid disorders, utilizing the precipitin, complement fixation and hemagglutination technics. Thyroid autoantibodies were demonstrated by one or more technics in 98 per cent of 106 patients with Hashimoto's disease, 83 per cent of 101 patients with spontaneous adult myxedema, 64 per cent of 181 cases of thyrotoxicosis, 33 per cent of 198 cases of nontoxic colloid goiter, 68 per cent of 19 patients with subacute thyroiditis, and 29 per cent of 39 cases of thyroid cancer. The highest antibody titers were found in Hashimoto's disease and myxedema; in general, low titers were found in the other thyroid diseases, and the presence of autoantibodies was associated with localized lymphoid infiltration of the gland. Balfour, et al.[35] reported that of 300 patients with Hashimoto's disease, antibody studies utilizing the precipitin, tanned red cell agglutination, and CF microsomal technics were positive in 95 per cent of the cases, and in two thirds of the cases, all three tests were positive. It was also shown that there was a secondary antibody to the colloid using fluorescent studies which was present as common in the Hashimoto's patients as was the thyroglobulin and microsomal CF antibody.

F. The coexistence of Hashimoto's disease and other diseases of assumed autoimmune etiology has often been seen. Hashimoto's disease has been seen in patients with Addison's disease, Sjogren's syndrome, progressive hepatitis, nephrosis, acquired hemolytic anemia and collagen diseases. Hijmans, et al.[36] has done extensive work to show the relationship between SLE, rheumatoid arthritis and thyroid autoimmune disease.

SLE, rheumatoid arthritis and thyroid disease have been shown to have a degree of overlap of autoantibodies greater than might be expected by chance. Patients with SLE have an incidence of thyroid antibodies three times greater than the normal antibodies.

Skanse and Nilson[37] studied thyroid antibodies in patients with hypergammaglobulinemia, and showed tanned red cell agglutination tests were positive in from 2.7 to 17.6 per cent of patients without thyroid disease, and CF antibodies were positive in 2.9 per cent of patients. The thyroid antibody reactions were expected to be increased in patients with increased gamma globulins since in patients with Hashimoto's disease the serum anti-thyroglobulin was found to be mainly located in the 7S and 19S gamma globulin.[40]

Disease	*TRC Per Cent*	*CF Per Cent*
Disseminated Lupus	4/27 = 14.8	4/19 = 21
"Diffuse Collagen" Dis.	4/17 = 23.5	1/12 = 8.3
Cirrhosis	1/30 = 3	1/25 = 4
Multiple Myeloma	4/28 = 14.3	2/28 = 7.2
Macroglobulinemia	3/23 = 13	1/23 = 4.3
Healthy	10/250 = 4	1/250 = .4

The over-all incidence of positive TRC agglutination tests in hypergammaglobulinemia was 13.5 per cent and that with CF antibodies was 7.8 per cent, which was significantly higher than the controls. The outstanding feature of the study was the low incidence of positive tests in patients with cirrhosis of the liver.

Pettit, et al.[38] studied 58 diabetics less than 16

Clinical Dx	*No. of Pts.*	*Thyroid (3 Tests)*	*LE Cells*	*ANF (Anti-nuclear)*	*RA Latex*
SLE	60	15/60 = 25%	59/60 = 98%	59/60 = 98%	20/50 = 40%
SLE and Hashimoto's	5	5/5 = 100%	5/5	5/5	0/5
Rheum. Arthr.	79	9/79 = 11%	16/79 = 20%	40/79 = 50%	35/64 = 55%
R.A. and Hashimoto's	7	7/7 = 100%	0/7	3/7	5/7
Hashimoto's Uncomplicated	182	182/182 = 100%	0/110	14/182 = 8%	2/98 = 2%
Controls	0	10%	0%		

years old and found 13/51 (22 per cent) had positive reactions and 10 other questionable (doubtful positive) reactions for antithyroid antibodies using the Coon's labeled antibody method which demonstrates both agglutinating and CF antibodies. The explanation is that a biochemical dysfunction of the thyroid gland leading to autoimmunization is an inherent component of hereditary diabetes mellitus, but is far overshadowed clinically by the dysfunction of the pancreatic islets.

Chandler, et al.[41] have shown that there is a significantly greater incidence of a thyroid autoimmune process in mothers of athyreotic cretins (24.8 per cent) than in mothers of normal offspring (6 per cent). Although this greater incidence is noted, analysis of the data did not support the thesis that the antibodies were destructive, but rather that these antibodies reflected an autoimmune process and that some unknown factor is responsible, such as possible role of delayed hypersensitivity.

CONCLUSIONS

G. The underlying abnormality leading to the development of the autoimmune process is unknown. Autoimmunity can arise and lead to disease when mechanisms of self-recognition fail or when organ-specific antigens are abnormally released. Much remains to be learned about the factors which initiate tissue destruction and the role of genetic predisposition, in many instances of which, such as in rheumatoid arthritis, we still do not know much about the nature of the presumed autoantigens involved in the disease. Recent work suggests the thymus is the key organ for development of normal immunologic responses and it is likely our understanding of autoimmune disease will greatly improve with further study of this difficult organ.

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EUGENE T. DMYTRYK, M.D., *St. Louis*

Intestinal Obstruction Following Anastomosis With the Rankin Clamp

Intestinal obstruction is one of the more common emergencies of abdominal surgery and consistently challenges the abdominal surgeon. There are many causes of intestinal obstruction as classified by Zuidema[1] in the textbook "Surgery" by Nardi and Zuidema published in 1961. Other classifications of intestinal obstruction have been reviewed[2-6] but this clinical classification is probably the most complete one available.

Among the causes of postoperative obstructions, stomal obstruction due to edema and stricture are noted. This particular type of obstruction—stomal—is the basis for this presentation of three cases seen between September 1958 and March 1961.

The late Dr. Fred W. Rankin first presented his method for an aseptic intestinal anastomosis utilizing the instrument which bears his name in 1928.[7, 8] Many of the younger practicing surgeons and the majority of surgical house officers today are not familiar with the Rankin clamp and the technic of using it properly. This is understandable since the Rankin clamp was devised in the pre-antibiotic era when colon surgery carried a "prohibitive" mortality, especially when compared to current day statistical data. They would do well to review this excellent treatise of original clinical investigation.

The detailed technic for proper use of the Rankin clamp is described elsewhere[7, 8] and will not be repeated here. The last line of the paragraph which describes the clamp and its use bears repetition—"The diaphragm must be broken out with the fingers through the lumen."

These three cases are presented as a clinical review because they all had one common denominator—a postoperative obstruction following anastomosis with the Rankin clamp. The primary pathology was different in all three patients and all had difficult and complicated postoperative courses.

Case Reports

Case 1. A 24-year-old male was admitted to the hospital on September 13, 1958, with constant and severe right lower quadrant pain of 18 hours duration associated with nausea. There had been no vomiting or changes in bowel habits. Pertinent findings on physical examination were limited to the abdomen where right lower quadrant tenderness was noted with a palpable, tender, mobile mass measuring 5 by 3 cms. The temperature was 99 F., hemoglobin and hematocrit were normal and white cell count was 8,900 with a normal differential count. He was taken to the operating room shortly after admission with a preoperative diagnosis of acute appendicitis, questionable regional ileitis. At operation the distal ileum for approximately 12 inches was red and thickened; no skip areas were noted. The cecum and appendix were normal. The abdomen was closed without removing any tissue. His immediate postoperative course was uneventful and he was discharged on his seventh postoperative day.

Three case reports are presented in which obstruction following anastomosis utilizing the Rankin clamp are presented.

Dr. Dmytryk is from the Department of Surgery, St. John's Hospital, St. Louis.

This patient was readmitted to the hospital on February 9, 1959, because of cramping abdominal pain of one month duration. For two days prior to admission nausea and vomiting prevailed, but there was no diarrhea or rectal bleeding. Physical findings of significance were limited to the abdomen. A 5 by 5 inch tender, non-movable mass was palpated in the right lower quadrant. Hyperactive bowel sounds, associated with cramping pain, were heard over the entire abdomen. The patient was moderately dehydrated. Routine blood counts were reported to be within limits of normality.

After hydration and decompression the patient was operated upon on February 12, 1959. The terminal ileum and cecum were thickened and adherent to the lateral aspect of the abdominal wall in the right iliac fossa. A right hemi-colectomy was performed restoring the intestinal continuity with an end to end ileo-transverse colostomy utilizing a Rankin clamp. A "skip" area in the upper jejunum was also excised and intestinal continuity restored with an end to end Rankin clamp anastomosis. The pathologic report on the tissue was: Cicatrizing enteritis (regional ileitis).

The postoperative course was as follows: February 14, 1959 (second postoperative day), Levine tube removed in the morning with vomiting occurring that evening; February 15, vomiting continued; abdomen distended; hypoactive bowel sounds; February 17, Wangensteen suction; marked abdominal distention; afebrile; February 19, vomited around Levine tube; abdomen distended; bowel sounds were present; tender in both lower quadrants; February 20, spontaneous bowel movement; nauseated; vomited one time; February 22, vomited 1,400 cc.; nauseated; active bowel sounds; February 23, continuous drainage from the Levine tube; hypochloremia 70 meq./L.; CO_2 43 meq./L.; Na. 139 meq./L; K. 3.4 meq./L.

On February 24 (twelfth postoperative day), the patient was taken to the operating room with a preoperative diagnosis of intestinal obstruction. His old right rectus incision was reopened. The ileo-transverse colostomy was intact, but the proximal jejunum above the site of anastomosis was markedly distended. It was at this point that I was called in consultation. The jejunum was completely obstructed by a diaphragm of tissue at the anastomosis site. A double jejunostomy was performed just distal to the obstruction. The obstructing diaphragm of tissue was broken via the proximal jejunostomy opening and then a catheter was passed proximal to the anastomotic site for decompression.

The distal jejunostomy was used for "feeding" purposes. The intestinal contents from the proximal decompression tube were instilled into the distal tube by connecting the two tubes on March 1, 1959. His postoperative course from this time was uneventful except for a wound infection. The jejunostomy tubes were removed on March 10, and he left the hospital on March 14, 1959.

Case 2. This 55-year-old female was hospitalized on January 20, 1960, because of abdominal pain of three days duration and anorexia. The pain was periumbilical at onset and gradually localized in the right lower quadrant. Examination revealed a palpable tender mass in the right lower quadrant with muscle guard, rebound tenderness and hypoactive bowel sounds. No temperature elevation was present and the white cell count was 11,600 with a normal differential count.

Two hours after admission the patient was taken to the operating room with a preoperative diagnosis of acute appendicitis with abscess. A mass was found in the ascending colon and was removed by a right hemi-colectomy. The intestinal continuity was restored with a side to side anastomosis using the Rankin clamp.

Pathologic report was diverticulum of cecum with perforation and abscess formation; mucosal polyps of cecum.

The postoperative course was as follows: January 22 (second postoperative day), abdomen was soft with no distention; bowel sounds were present, Levine tube was removed; January 23, moderate abdominal distention; high pitched bowel sounds; Levine tube inserted; January 24, abdomen soft with no distention; bowel sounds present; afebrile; January 25 seen in consultation. The abdomen was distended with a tympanitic percussion note. Bowel sounds were active but gave the impression of an obstruction, that is losing its bowel tone and declining to an ileus. X-rays of the abdomen revealed dilated loops of small bowel with fluid levels.

The patient was taken to the operating room with a preoperative diagnosis of intestinal obstruction. The peritoneal cavity was filled with straw colored fluid and the small intestine was dilated to three times its normal size with gas and fluid. The point of obstruction was the anastomotic site at the ileo-transverse colostomy. The anterior suture line had perforated and was sealed off by adherent omentum. The obstruction was due to a complete diaphragm of tissue at the site of anastomosis. A fairly wide resection of the ileum and colon was carried out and the intestinal continuity restored by an open end to end anastomosis. A catheter was placed in the ileum and passed beyond the anastomosis for decompression.

The postoperative course was complicated somewhat by electrolyte imbalances which responded readily to replacement therapy. On January 31 (fifth postoperative day), the patient had a spontaneous bowel movement and the Levine tube was removed. On February 1, 1960, the ileostomy catheter was removed and the fecal fistula closed spontaneously within one week. The patient was discharged on February 13, 1960.

Case 3. This 59-year-old female was admitted to the hospital on March 30, 1961, with known cholelithiasis of 20 to 25 years duration. One week prior to admission she had a severe biliary colic. The admission laboratory work was all within limits of normality. Cholecystograms on April 1, 1961, revealed a poorly functioning gallbladder with multiple calculi. On April 4, 1961, she was operated upon by the admitting physician and surgeon. An elective cholecystectomy, appendectomy and biopsy of an enlarged mesenteric lymph node were performed. The pathologist reported chronic cholecystitis with cholelithiasis and metastatic mucinus adenocarcinoma of the mesenteric lymph node.

At this point another surgeon was called in consultation. X-ray studies revealed a carcinoma of the sigmoid colon. On April 13, 1961, the patient had a sigmoidectomy performed with an end to end anastomosis performed with a Rankin clamp. Her postoperative course was unsatisfactory with abdominal pain, distention, leukocytosis and anemia.

She was seen in consultation by me on April 19, 1961 (sixth postoperative day), because of progressive abdominal distention and x-ray evidence of obstruction with a dilated cecum measuring 13 cms., in diameter. An emergency cecostomy was performed under local anesthesia. The patient was transfused several times to correct her anemia and her electrolyte balance was maintained with replacement therapy. A barium enema was done on April 24 (five days after cecostomy) and revealed a complete block at the operative site. On April 27, a wide left colectomy was performed and intestinal continuity restored with an open end to end anastomosis. The surgical specimen revealed a diaphragm and marked inflammatory changes at the site of anastomosis. The patient had a satisfactory postoperative course and was discharged on May 14, 1961. At the time of this report (two years later) she is alive and in good health.

Summary

Three unusual and interesting cases have been presented. They represent patients who were operated upon for three entirely different basic pathologic entities and subsequently developed obstruction following anastomosis utilizing the Rankin clamp.

There is little doubt that in the pre-antibiotic era the Rankin clamp served a most useful purpose. However, it is my feeling that there is little or no need for its use today. I do feel that it would be a stimulating experience for those unfamiliar with the Rankin clamp to review this excellent treatise of original clinical investigation.

University Club Bldg.

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UNCERTIFIED CORRECTIONAL BIRTH RECORDS DISCONTINUED

Physicians and hospitals have raised questions, according to the Division of Health, concerning its discontinuance of a procedure by which uncertified facsimile copies of birth records were mailed to the mothers for correctional purposes. The procedure has been discontinued by the Division of Health because of the confusion which it caused and because of its exorbitant cost.

For many years, the Division of Health has made a practice of mailing uncertified facsimile copies of babies' birth records to the baby's mother shortly after the time of birth. These facsimile copies were sent out in order that the mother might have an opportunity to correct any errors prior to the time that the certificate was made a permanent matter of record. The response on the part of mothers has decreased.

In spite of the explanation which accompanied each uncertified copy, the mothers in many cases continued to feel that these were certified copies of birth and attempted to use them for official purposes. Such attempts resulted in inconvenience and confusion. The program of sending uncertified copies to mothers was discontinued July 15, 1963.

Parents may obtain a legal certified copy of their child's birth record by submitting a request to the section of Vital Records, Division of Health, Jefferson City, Mo. When such a request is made, the mother should give the child's name, the date and place of birth and the parents' names. Upon receipt of this information and a fee of $1.00 as is required by law, the Division of Health will issue to the parents a certified copy of birth which has legal validity.

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MARGARET C. L. GILDEA, M.D., ***St. Louis***

Some Thoughts on the New Community Mental Health Centers Program

The advantages of the mental health centers is discussed as well as the possibilities of set-up of the centers.

Dr. Gildea is on the faculty of Washington University School of Medicine.

It is now almost 20 years since Congress passed the National Mental Health Act. One manifest result has been the great increase in interest in mental health services for everyone, in all settings, that has developed around the country. A great deal of this impetus was initiated and the momentum kept up by the Public Health Service, under whose auspices the National Health Institutes and especially the National Institute for Mental Health have developed. These have given strong leadership, continuing propulsion and direction to the entire movement. From 1947 on, funds have been available to help in community planning and services through the National Institute of Mental Health. This is now at a point in the development of federal interest and appropriations that the President has recommended, and Congress has approved, considerably larger sums of money to be spent by the individual states in community mental health operations, with special renewed emphasis on the development of local mental health centers. At this time (October 24, 1963) a bill approving $150,000,000 for the construction of Mental Health Centers has passed both houses and awaits the President's signature. A provision for the initial staffing of these centers has been deleted. Thus it remains the responsibility of the states to organize and staff these centers.

The exact functions of these centers, and in fact the whole idea of community mental health, is broadly interpreted, and a wide range of activities can be subsumed under this heading. Every state differs in regard to health services available at present, depending on distribution of population, transportation facilities, the cultural and sociological character of the population and all the other factors that influence the ability of a population to support and to make use of community mental health services. For instance, the best possible clinic located in a city in one of the midwestern or western states is not able to offer much useful service to a population that lives farther away than an hour's travel.

When I first came to St. Louis I was impressed with the fact that many of the patients I saw at the Washington University Clinics, as well as in private practice, came from two to five hundred miles away. I have had patients commuting in for weekly treatment hours from five hundred miles away by air, but this is an extraordinarily impractical and uneconomical way to give mental health services because the machinery involved in making the trip may easily outweigh any possible benefits. Perhaps if a patient travels 500 miles to see the doctor, the doctor has to do something 100 times better for the patient than if the patient has traveled only five miles. Think what a strain this puts on both doctor and patient! The Public Health Service has long recognized this and has established neighborhood clinics for the care and immunization of children, and local health departments which offer a variety of other kinds of health services locally, on the spot.

It is manifestly impossible to set up clinics organized on the lines laid down by professional standard setting organizations in so many communities throughout the country that no one would have to travel for more than an hour to attend. The expense would be prohibitive, and securing this number of people with the proper qualifications to staff and run these clinics would be out of the question at any time in the near future. The National Institute for Mental Health and other mental health promoting agencies have recognized this for years, and have promoted many conferences on the best utilization of local resources for mental health services in the communities where they already exist. I attended conferences 10 years ago in Florida and in Texas in order to discuss the best possible ways to set up services locally, using the material at hand, so that people could find the help they needed at home, or a reasonable distance from where they lived.

Of course the entire concept of bringing mental health services to local communities is not new. The concept of the traveling clinic was developed to solve this problem, and I remember 20 years or so ago in Connecticut when traveling clinics were considered the ultimate in community services. Connecticut of course is quite a different kettle of fish from Missouri because in Connecticut practically nobody lives more than a half hour away from anywhere and a traveling clinic can get where it is going and back with much greater economy than in Missouri.

During a recent session of the state legislature traveling clinics were established in all our state hospital districts, and there are 14 of these in operation in the state at present. I am sure they do a great deal of good for many patients, but the type of service which they can offer must be largely diagnostic or consultative. Certainly little actual treatment can be offered through this medium. Further than this the expense of these traveling clinics is great. Recent studies in Missouri show that each patient contact costs more than $40. In a clinic established in most communities a patient contact costs between $10 and $25, and a recent study[1] shows that mental health visits by visiting nurses cost less than $6 each.

It seems to me, then, essential that a completely flexible approach should be maintained, and what each area has to offer in the way of services already available be considered. Many of these services can be expanded, developed and correlated to serve mental health purposes. This requires close cooperation centrally between the organizations which control the local branches, and locally with the individual organizations. It goes without saying that it also requires close supervision and assistance to be offered to the workers at the local level in order to derive the most from the potential of these resources which are already there.

There are at least five potential mental health resources covering the state. They are:

1. To every citizen some kind of medical help is available from local doctors. It may not be close at hand, and it may not be within the financial reach of everyone, but medical help can be found for everyone, on some level. Although the local doctors are greatly pressured, and not always too well rewarded, they are continually offering their patients mental health assistance, whether they call it that or not. Much of this sympathetic and supportive help may reach the patient through the medium of the hypodermic needle (which is quicker than the psychiatric interview, and some people think just as efficient). These doctors could do much more in mental health services if their hands were strengthened by ancillary personnel with training in mental health skills, and with an organized community mental health center through which to work. I think, for instance, they would be especially helped by having the possibility of home visits occasionally by public health nurses.

2. The state is covered by the Division of Public Health and its branches. Every county does not have its own health department but there are regional offices everywhere and the services of the public health staffs, including nurses, are available to everyone in the state. Public health nurses are playing an increasingly important role in the mental health field.[2, 3]

3. The Department of Welfare also blankets the state. There are county welfare offices everywhere and welfare workers are available to call on every home in the state.

4. The University Extension Service has home economists and agricultural consultants also spread across the state and available for consultation to every rural family.

5. The State Hospital system, under the Division of Mental Diseases, offers the required help to the very sick, and will be able to do much more consultative and preventive work as more personnel becomes available.

These are the available resources. Now, what kinds of services would one like to be able to offer through these centers to the rural populations and the people who live in small communities throughout the state? They have of course the same kinds of problems in the area of mental health that all the rest have. For instance, there will always be some people who are severely mentally ill and who will need hospitalization. These people at present go to their local state hospitals. In the future they will go to one of the three Rapid Treatment Centers for study and intensive help; but the problems of some of them will go on to the state hospitals, and some will go directly back to the community.

After they leave these hospitals and return home they need help and support from the family and community. It has been quite well shown by studies in Massachusetts[4] and elsewhere[5] that the more assistance these people get when they return home, from family, physicians, employers and others, the better they will adjust and the fewer of them will return to the hospital for further treatment. Many of these patients return to their local doctors, but not all have the financial resources for private care. The local doctor can do much more for these patients if his hand is strengthened by some kind of mental health worker to help the patient reintegrate in the community, in his job and his home. Many welfare workers do already assist in these followup services, and will be able to do so more effectively when centers are organized. In some states, Florida particularly, the discharged mental patient is the charge of the health department, and followup is chiefly done by the public health nurse, who can be a valuable aid in after-care, both when the patient is ready to leave the hospital and after he is back home again. She is especially skilled in house calls, by traditional training. And she also will be able to do a more efficient job when she is supported by a mental health center.

Next to consider is the whole array of adult maladjustments, some of which manifest themselves in unusual or abnormal behavior and some in "nervousness" or physical illness. Patients with these troubles will benefit enormously from help with their personal problems, and study of the whole situation: psychotherapy or counseling. This kind of service should be an important function of the center. It is often said that it will be a long time before a sufficient number of people are trained in psychotherapy or counseling to offer this service to the entire population, in enough areas spaced so that no one will have to travel more than an hour to get there. But I believe there are ways of utilizing short cuts in training ancillary personnel to offer these services under supervision. The National Institute for Mental Health has recently financed a study[6] on the training of mental health counselors in which housewives over 40 whose children have left home are offered an intensive course in psychotherapeutic technics. They have been found most useful in counseling services. Utilization of this kind of person may not be economical because it requires much training and supervision, but there is an enormous pool of local talent hidden in homes where children have grown up and left.

The central theme of preventive psychiatry is services for children. It has been apparent over the years that either traveling clinics, or clinics located where the patient must travel great distances, can offer nothing more than diagnostic or consultation services and recommendations for children and their parents. When these mental health centers are established this will change. I would like to see a center in which there were a few beds (perhaps 20 or 25) available for observation of children who are in acute difficulties. I would not propose that these should be used for any long-term treatment. Perhaps the maximum stay of any child would be two weeks. This should enable the local doctors, the center personnel, nurses, social workers and whatever psychiatric or psychological consultant is available, to form an opinion about the child's difficulties and the best way of dealing with them. For those children who are less ill but whose behavior is disturbed, I would like to see home visits made possible either by the nurse or social worker. One home visit contributes more understanding to the unravelling of a child's problems than three office visits, in many cases.

However, the basic preventive service for children is the school mental health service, and this should be available to every school in the state, and should be a top priority service of these centers when they come into being. Since the school is the natural habitat for all children from 6 to 16, this is the ideal spot for identification and study of the child's problems and for help to be given before more stringent and expensive steps like individual counseling, psychotherapy or hospitalization become necessary.

In the school mental health work done in St. Louis and St. Louis County, by far most has been done by social workers or psychiatric social workers who have acted as school counselors. In early work in St. Louis City[7] it was demonstrated that psychologists were effective as school counselors and also that one of these 40-year-old housewives was equally successful.

I would like to see the development in this state of a job category called "mental health worker" or "mental health aide." Long ago I proposed that a job category called "school mental health worker" be established. This person should have a bachelor's degree, should be selected for interests, aptitudes and personality characteristics, and should be given one year of graduate training, the nature of which was discussed with representatives of several different disciplines. The learning and experience which I would like to see this worker get in the one postgraduate year would be in interview technics, personality development and parent-child relationships, and a review of school administration, school policies, problems, curricula and organization. I then proposed that this one year graduate would work in the field under the close supervision of a more experienced school mental health worker with traditional training in social work or psychology.

This classification has been developed in Florida.[8] People with a wide variety of previous experience have been trained in mental health theories and technics and have been found most useful working in many community activities, including schools. A report from the Florida State Board of Health tells how they have put their plan into action. They began with public health nurses, giving them in-service training in new ways of working with mental health specialists. They designated their first mental health workers in 1954, and stated their initial qualifications as "a bachelor's degree or equivalent," including in this general category a graduate degree from an accredited school of nursing. Related experience was also required. The junior classification required two years of related experience and the senior, five years. They interpreted the type of experience required liberally. Any experience such as ordinarily obtained by a public health nurse, social worker or visiting teacher was at the top of the list. Primary emphasis was laid on finding mature, stable individuals who have "pleasing personalities and a pioneering spirit." I would add also a certain degree of aggressiveness, but capacity to control immediate hostile reactions. These workers were under the supervision of local health officers and state personnel, who had administrative responsibility for the worker, just as for other staff members. Senior consultants were always available from the State Bureau of Mental Health.

These workers in Florida are encouraged to develop programs in their areas along the lines of their special interests. In general, they have been involved in mental health education, which is a part of the general health education program of practically all local health departments. They have also been involved in "personal face-to-face helping" activities, which can certainly be subsumed under the general term, "counseling." They are warned to avoid problems requiring "psychotherapy," and it is said that counseling rarely exceeds six sessions, during which time the worker decides whether the case needs to be referred for professional assistance. These workers are involved in the programs of patients both in and released from mental hospitals. They participate not only in the followup programs, but also in the liaison work between the mental hospitals and the families of newly admitted patients. Individual case work and home visiting are a common activity.

Like others with more conventional training, these people can act as aides under supervision in all the school mental health service. They can receive referrals of children from school personnel, and study the individual child's difficulty in the school and visit when indicated in the home. In some schools the worker can sit with a teacher who is having special problems during class hours and give her immediate objective assistance with situations as they arise hour by hour and day by day, thereby sensitizing the teacher to the mental health problems of her charges and helping her to deal with these problems immediately. These workers can help to organize workshops, in-service training, or case conferences in every school all over the state, and can serve in this way a useful preventive as well as therapeutic purpose.

Continual professional supervision of these workers is essential. The Florida group says that they have found in-service training to be valuable with periodic work conferences and workshops. Gradually, this group of people from differing backgrounds has become a homogeneous, working force. A fully qualified social worker or psychologist can multiply his usefulness many times with assistance such as aides like this can give.

The systematic organization and development of these new Mental Health Centers, their direction and staffing, is yet to be worked out. The actual form of each center should take its shape from the needs and resources in each community. A blueprint will not and should not be imposed by federal or state officials on each community. The growth, development and responsibility must come largely from the local resources and leadership, with consultation when requested from any professional group. An executive committee correlating this planning is now at work. I feel sure we can look forward to a great new development in mental health services for the local communities in this state.

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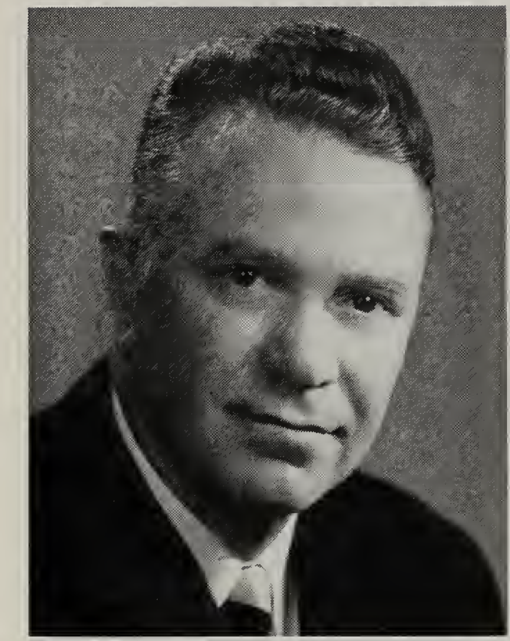

Kenneth C. Hollweg, M.D.

President's Message

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We need to gain information from our colleagues locally as well as from our colleagues far and wide so that we can obtain education from our excellent scientific program.

Arrange to hear Dr. "Norm" Welch, our most able President-Elect of the American Medical Association—a treat to hear again if you have already heard and a treat to hear if you have not heard. He is the invited guest to speak at the annual banquet.

See "you all" at the annual session, March 8 to 11.

EDITORIAL

POPULATION AT THE MAIN PRODUCTIVE AGES

About 85 million people in the United States, or almost 45 per cent of the total population, are in the age range from 25 to 64 years—the period of maximum productivity and family responsibilities, according to a report by the Metropolitan Life Insurance Company. This large segment of the population is expected to exceed 90 million by 1970 and reach 106 million in 1980. The growth between 1960 and 1970 will be moderate –8.5 per cent—but is expected to be twice as large in the following decade.

This accelerated growth during the 1970's will result largely from a sharp rise in the population at ages 25 to 34. As the record number of children born following the close of World War II pass their 25th birthday, the population in the 25 to 34 age group is expected to increase from about 25 million in 1970 to more than 36 million in 1980, or by 45 per cent. This is nearly five times the growth anticipated for the 1960-1970 period. It is noteworthy that all of the increase at these ages in the 1960's will occur after 1965; recently the population in this age group has actually been declining.

The population at ages 35 to 44 will follow another course, reflecting the level of births prevailing 10 years earlier than that influencing the trend of the population at 25 to 34 years. In 1970 there will be 1,100,000 fewer people at ages 35 to 44 than there were in 1960. Between 1970 and 1980, however, this age group will increase by 2,100,000, reaching 25¼ million at the end of the decade.

Still another growth pattern is expected for the population at ages 45 to 64. It appears that the number of people in this age group will increase by about one sixth between 1960 and 1970, but by less than 5 per cent in the decade thereafter. This is the only age group in which the relative increase for females will exceed that for males—a result of the considerably greater depletion of men than women by mortality.

At the time of the 1960 Census, more than 80 per cent of the men and women aged 25 to 64 were married. The proportion varied somewhat with sex and age. Among men it was about 82 per cent at ages 25 to 34 and rose to 89 per cent for those 35 to 44 years; correspondingly, the proportion for bachelors decreased from 16 to 8 per cent. Even at ages 45 to 64, the percentage married was only slightly below that at 35 to 44 years, the decrease reflecting largely the marked rise in the number of widowers.

In early adult life the proportion married is greater among women than it is among men. Thus, at ages 25 to 34 years in 1960, the married comprised about 88 per cent of all women. At ages 45 to 64, however, the proportion was slightly less than 74 per cent. The 2¾ million widowed at these ages constituted 15 per cent of all women, or 4½ times the proportion among men. Relatively more women than men were reported as divorced at each of the age periods under review.

In the entire range of ages from early adult life to the threshold of old age, the large majority of American men live with their wives in a household of their own. This is the living arrangement of three fourths of all men at ages 25 to 34 and of more than four fifths of those in the next 30 years of life. The proportion of women who are the head of a household increases from 7 per cent at ages 25 to 34 to 19 per cent at 45 to 64 years. An appreciable number of men and women in the age range 25 to 64 years live in the household of other relatives. Only a small proportion, however, live in institutions or other quarters.

About 93 per cent of the men and 40 per cent of the women aged 25 to 64 years were in the labor force in April 1960. Among men, labor force participation was at a maximum in the age range 25 to 44 years, when all but 5 per cent were employed or seeking work. At 45 to 64 years the proportion was just below the 90 per cent mark. Among women, on the other hand, the relative number in the labor force increased from 35 per cent at ages 25 to 34 to about 42 per cent at ages 35 to 64. This rise reflects the reentry of many women into the labor market after their children grow up.

Ramblings of the Field Secretary

A large audience of physicians, their wives and guests attended the 129th Annual Meeting of the St. Louis Medical Society on Tuesday night, January 7, where they witnessed an impressive ceremony of the installation of officers for 1964. The new officers installed were: Drs. David N. Kerr, President; Walter T. Gunn, President-Elect; R. W. Kelley, Vice President; R. V. Bradley, Secretary; C. H. Nicolai, H. A. Ritter and E. A. Powell, Councilors. Following a short talk summarizing some of the major activities of the Society during 1963, the retiring president, Dr. Charles S. Sherwin, turned over the gavel to Dr. Kerr. The new President, in his remarks, outlined a number of projects for the Society's consideration during the present year.

St. Louis Medical Society installation ceremonies drew a large attendance.

Drs. Kerr, Sherwin, Gunn and Kelley headed the receiving line.

After the formal ceremonies were completed the President's Reception added much to the evening's festivities. This part of the program was arranged by the Woman's Auxiliary and included refreshments, music for dancing and an appropriate atmosphere for socializing.

The newly elected officers of the St. Louis County Medical Society for 1964 were installed at the Society's installation dinner dance on Wednesday night, January 8, at Le Chateau, St. Louis County. Kenneth C. Hollweg, M.D., President of the MSMA, conducted the official installing procedure following a short talk to those assembled. These new officers included: Drs. James R. Nakada, President; James C. Sisk, President Elect; Stanley L. Harrison, Vice President; C. Howe Eller, Secretary; Edmund V. Cowdry Jr., Robert A. Mayer and Paul W. Miles, Councilors. The evening festivities began with a social hour, followed by dinner and the more formal part of the program. At the conclusion of dinner, Dr. Robert A. Mayer, retiring President, introduced the many guests present and in his

Dr. Nakada, Mrs. Mayer and Dr. Mayer hear remarks of President Hollweg.

Dr. Sisk was seated between Mrs. Sisk and Mrs. Nakada at the head table.

(Continued on page 244)

release for hostility?

Overeating is often an outlet for feelings of hostility. Many people take out their anger by overindulgence at or between meals. As a result they become overweight.

'Eskatrol' *Spansule* capsules both control appetite and relieve the emotional stress that causes overeating. That's why so many patients are losing more pounds with 'Eskatrol'.

ESKATROL® Trademark

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because emotions play an important role in overweight

Brief Summary of Principal Side Effects and Cautions

Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory. *Cautions:* 'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability. There is a possibility, though little likelihood, of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms) from the phenothiazine component in 'Eskatrol' *Spansule* capsules.

For complete prescribing information, please see *PDR* or available literature.

Supplied: Bottles of 50 capsules.

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News—Personal and Professional

"Communication" was the subject of a talk given by **George J. Lytton**, M.D., Kansas City, to a senior high school assembly at Pembroke Country Day School in December.

The St. Louis Surgical Society will present the fortieth Hodgen Lecture at 6:00 p.m. on March 3 at the St. Louis Medical Society Bldg. **W. A. Altemeier**, M.D., professor and chairman of the Department of Surgery, University of Cincinnati College of Medicine will speak on "Recent Studies in the Nature and Control of Staphylococcal Enterocolitis Following Antibiotic Therapy."

Among recent associates selected by the American College of Physicians are **Richard A. Reider**, M.D., and **Emil F. Miskovsky**, M.D., St. Louis; **John I. Matthews**, M.D., Jefferson City; **Daniel L. Dolan**, M.D., Springfield, and **Paul C. Vescove Jr.**, Smithville.

Recently elected officers of the Bethesda General Hospital, St. Louis, are **William H. Riley**, M.D., president; **Charles Sherwin**, M.D., vice president, and **Preston C. Hall**, M.D., secretary.

Recently elected officers of the medical staff of Christian Hospital, St. Louis, are **Oliver E. Tjoflat**, M.D., chief of staff; **S. E. Pawol**, M.D., associate chief, and **Marion D. Bishop**, M.D., secretary.

The Southern Boone County Rt. 1 P.T.A., had as speaker early in January **B. A. Moranville**, M.D., Columbia, who discussed the Sabin oral polio vaccine.

The staff of Missouri Baptist Hospital, St. Louis, recently elected **Truman G. Drake**, M.D., as chief of staff. Other staff officers elected are **Robert A. Mayer**, M.D., associate chief of staff; **W. Edward Lansche**, M.D., secretary, and **Richard A. Jones**, M.D., treasurer.

Late in January **Bertrand D. Coughlin**, M.D., was installed a member of the 12 member board of Notre Dame University.

The medical staff of Alexian Brothers Hospital recently elected **William Parker**, M.D., as president of the staff. **William Irvin**, M.D., was named vice president, and **Andrew Luh**, M.D., secretary-treasurer.

At a ceremony at St. Patrick's Cathedral, New York, early in January **Roy V. Boedeker**, M.D., St. Louis, was invested as a Knight of Malta.

At a meeting of the American Academy of Dermatology held in Chicago in December, **Clinton W. Lane**, M.D., was elected president of the organization.

The Columbia Altrusa Club had as speaker at a January meeting **H. M. Hardwicke**, M.D., Jefferson City. He spoke on "A Home Nurse Program."

First speaker in a series of guest lectures scheduled for Kansas City General Hospital was **William A. Knight Jr.**, M.D., St. Louis, who spoke on "The Physiological Basis for Screening, Diagnosis and Treatment of Pancreatic Disease."

"Electrocardiography" was the subject of a presentation by **Michael Bernreiter**, M.D., Kansas City, to the Greater Kansas City Academy of General Practice late in January.

The South Central Business Association has elected **John F. Bowser**, M.D., Kansas City, to the board of governors for a two year term.

The board of trustees of the Neurological Hospital, Kansas City, has reelected **G. Wilse Robinson Jr.**, M.D., Kansas City, president of the board. Dr. Robinson is medical director of the hospital.

Addressing the Mark Twain P.T.A. at Lebanon, **Rae W. Froelich**, M.D., Lebanon, spoke on "P.T.A. Informs You of Your Child's Health Needs."

(Continued on page 244)

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Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention...the enteric coating assures gastric tolerance...and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

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MISSOURI STATE MEDICAL ASSOCIATION
Hotel Chase, March 8-11, 1964

106th Annual Session

TIME AND PLACE OF MEETINGS

Sunday, March 8

12:30 p.m. Registration for House of Delegates, Lobby, Hotel Chase.
1:30 p.m. House of Delegates, Khorassan Room.
3:30 p.m. Reference Committee Meetings, Rooms Park, Coach, Colonial, Palladian, English and Embassy.
6:30 p.m. Committee on Diabetes and Missouri Diabetes Association Dinner Meeting, Stockholm Room, Park Plaza Hotel.

Monday, March 9

8:00 a.m. Registration, Lobby Floor, Hotel Chase.
9:00 a.m. Scientific Session, Khorassan Room.
10:30 a.m. Intermission to View Exhibits.
11:00 a.m. Scientific Session, Khorassan Room.
12:00 noon 50 Year Club Luncheon, Park Room.
12:00 noon Committee on Maternal Welfare Luncheon, Regency Room.
12:00 noon Luncheon Fireside Conference, Colonial Room.
2:00 p.m. Scientific Session, Khorassan Room.
2:00 p.m. Scientific Session, Lido, Room.
3:00 p.m. Intermission to View Exhibits.
4:00 p.m. House of Delegates, Khorassan Room.
5:00 p.m. Reference Committees.
5:00 p.m. Committee on Maternal Welfare, Eastern Division, St. Louis Medical Society Building.
6:30 p.m. St. Louis Gynecologic Society Dinner, St. Louis Medical Society Building.
6:30 p.m. Missouri Society of Internal Medicine Dinner, Stockholm Room.
6:30 p.m. Missouri Radiological Society Dinner, Coach Room.
6:30 p.m. Missouri Ophthalmological Society Dinner, Lido Room.
6:30 p.m. Missouri Surgical Society Dinner, University Club.

Tuesday, March 10

8:00 a.m. Registration, Lobby Foor, Hotel Chase.
9:00 a.m. Scientific Session, Khorassan Room.
9:00 a.m. Scientific Session, Lido Room.
10:30 a.m. Intermission to View Exhibits.
11:00 a.m. Scientific Session, Khorassan Room.
12:00 noon University of Missouri Medical Alumni Association Luncheon, Zodiac Room.
1:30 p.m. Medical Economics Session, Khorassan Room.
3:00 p.m. Intermission to View Exhibits.
3:30 p.m. Scientific Session, Khorassan Room.
3:30 p.m. Scientific Session, Lido Room.
6:00 p.m. St. Louis University Medical Alumni Reception, Stockholm Room.
6:00 p.m. Washington University Medical Alumni Reception, Coach Room.
7:30 p.m. Annual Banquet in Honor of Past Presidents, Khorassan Room.

Wednesday, March 11

7:00 a.m. Registration, Lobby Floor, Hotel Chase.
7:30 a.m. House of Delegates Breakfast Meeting, Chase Club.

Better blood pressure response than with a thiazide alone

"A dramatic potentiating hypotensive effect with excellent reductions in pressure was noted when syrosingopine [Singoserp]...was combined with hydrochlorothiazide [Esidrix]."[1]

Lower thiazide dosage

"Hydrochlorothiazide [Esidrix] lowers the blood pressure, and its antihypertensive activity is potentiated by syrosingopine [Singoserp], allowing for a reduction of the dose of diuretic substance without a decrease in control of the disease."[2]

Less risk of rauwolfia side effects

"The combination of syrosingopine [Singoserp] and hydrochlorothiazide [Esidrix] not only has the hypotensive effects of reserpine and hydrochlorothiazide but has the added advantage of causing fewer side-effects."[3]

Indications: Mild to moderate hypertension, especially when complicated by edema.

Average Dosage: 1 Tablet #2 (syrosingopine 1 mg./hydrochlorothiazide 25 mg.) t.i.d. For patients requiring less syrosingopine, substitute Tablet #1 (syrosingopine 0.5 mg./hydrochlorothiazide 25 mg.).

Side Effects & Precautionary Measures

Singoserp (syrosingopine): Use cautiously in patients with peptic ulcer. Discontinue several weeks prior to surgery, if possible.

Occasional side effect: nasal congestion. Rare side effects: gastric irritation, drowsiness, fatigue, nausea, headache, emotional depression, skin rash, restlessness, anxiety.

Esidrix (hydrochlorothiazide): Watch for signs of fluid or electrolyte imbalance. Further electrolyte depletion may cause hypochloremic alkalosis and hypokalemia. Since the latter may precipitate digitalis intoxication, watch carefully patients taking digitalis or its glycosides.

Pay special attention to electrolyte balance of patients with severe renal or hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma. Contraindicated in patients with oliguria and complete renal shutdown.

Rare reactions: purpura with or without thrombocytopenia, skin rash, photosensitivity, urticaria. Thiazides may decrease glucose tolerance; use cautiously in diabetics. Hyperuricemia may occur but is readily reversed by a uricosuric agent.

Occasional side effects: nitrogen retention (in hypertensive patients), nausea, anorexia, headache, restlessness, constipation.

Supplied

Tablets #2 (white), each containing 1 mg. syrosingopine and 25 mg. hydrochlorothiazide; *Tablets #1* (white), each containing 0.5 mg. syrosingopine and 25 mg. hydrochlorothiazide.

References

1. Kolodny, A. L., and Dabolins, R.: Angiology *11*:180 (June) 1960.
2. Bare, W. W.: J. Amer. Geriat. Soc. *8*:795 (Oct.) 1960.
3. Lisan, P., and Balaban, S. A.: J. Amer. Geriat. Soc. *8*:803 (Oct.) 1960.

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MISSOURI STATE MEDICAL ASSOCIATION

Preliminary Program

106th Annual Session

Hotel Chase, St. Louis

March 8, 9, 10, 11, 1964

Sunday, March 8, 1964

12:30 p.m. Registration of Delegates. Lobby floor.

1:30 p.m. House of Delegates, Khorassan Room.

3:00 p.m. Reference Committee meetings.

3:00 p.m. Reports of Officers, Coach Room.

3:30 p.m. Constitution and By-laws, Park Room.

4:00 p.m. Miscellaneous Affairs, Palladian Room.

4:30 p.m. Resolutions, Colonial Room.

4:45 p.m. Medical Education and Public Welfare, Embassy Room.

4:45 p.m. Necrology, English Room.

6:30 p.m. Missouri Diabetes Society dinner meeting, Stockholm Room.
H. E. Oppenheimer, M.D., Clayton, presiding.
Relationship Between Severity of Diabetes and Insulin Secretory Reserves, Holbrooke S. Seltzer, M.D., Dallas, Tex.

Monday, March 9, 1964

8:00 a.m. Registration. Lobby floor.

9:00 a.m. Panel: What's New, Khorassan Room.
Moderator: Thomas F. Frawley, M.D., St. Louis.
New Trends in Medicine: William D. Davis Jr., M.D., New Orleans.
New Trends in Surgery: Thomas L. Marchioro, M.D., Denver.
New Trends in Allergy: Charles W. Parker, M.D., St. Louis.
New Trends in ENT: John J. Shea, M.D., Memphis, Tenn.

10:30 a.m. Intermission to View Exhibits.

11:00 a.m. Panel: Current Concepts in Treatment of Chronic Renal Disease, Khorassan Room.
Moderator: C. Thorpe Ray, M.D., Columbia.
Problems Involved in an Artificial Kidney Center Devoted Solely to Chronic Dialysis, F. K. Curtis, M.D., Seattle.
Some Problems Involved in Human Homo-transplantation, Thomas L. Marchioro, M.D., Denver.

12:00 noon 50 Year Club Luncheon, Park Room.
M. K. Underwood, M.D., Rolla, presiding.
J. H. McCurry, M.D., Cash, Ark., Secretary, Fifty Year Club of American Medicine, Guest.

12:00 noon Committee on Maternal Welfare Luncheon, Regency Room.
A. C. Trueblood, M.D., Clayton, presiding.
Speaker: Arthur L. Haskins, M.D., Baltimore, Md.

12:00 noon Luncheon Fireside Conference, Colonial Room.
Vagrant Acid Fast Organisms in Pulmonary Disease: The Physician's Dilemma.
Moderator: Karl H. Pfuetze, M.D., Hinsdale, Ill.
Panelists:
Raymond F. Corpe, M.D., Rome, Ga.

Ernest H. Runyon, Ph.D., Salt Lake City, Utah.
John H. Seabury, M.D., New Orleans, La.
Henry C. Sweany, M.D., Mount Vernon, Mo.
Sponsored by the Missouri Chapter, American College of Chest Physicians.

Medical Session, Lido Room.

2:00 p.m. Panel: Liver Disease.
Moderator: Robert E. Koch, M.D., St. Louis.
Problems in Treatment of Cirrhosis, William D. Davis Jr., M.D., New Orleans.
Sponsored by the Missouri Society of Internal Medicine.
Hemochromatosis, Holbrooke S. Seltzer, M.D., Dallas, Tex.
Sponsored by the Missouri Diabetes Society.
Current Problems in Hepatitis, Hyman J. Zimmerman, M.D., Chicago.

Surgical Session, Khorassan Room.
Paul F. Max, M.D., St. Louis, presiding.

2:00 p.m. Regional Enteritis—Surgical Aspects, B. Marden Black, M.D., Rochester, Minn.
Sponsored by the Missouri Surgical Society.

2:30 p.m. The Chiari Frommel Syndrome (Medroxyprogesterone Acetate Therapy), Arthur L. Haskins, M.D., Baltimore, Md.
Sponsored by the St. Louis Gynecologic Society.

3:00 p.m. Care of the Child With Multiple Injuries, John C. Wilson Jr., Los Angeles.

3:30 p.m. Intermission to View Exhibits.

4:00 p.m. House of Delegates.

5:00 p.m. Reference Committee meetings.

5:00 p.m. Committee on Maternal Welfare, Eastern Division, St. Louis Medical Society Building.

6:30 p.m. St. Louis Gynecologic Society dinner meeting, St. Louis Medical Society Bldg.

6:30 p.m. Missouri Surgical Society dinner meeting, University Club.

6:30 p.m. Missouri Ophthalmological Society dinner meeting, Lido Room.

6:30 p.m. Missouri Radiological Society reception and dinner meeting, Coach Room.

6:30 p.m. Missouri Society of Internal Medicine, Stockholm Room.

Tuesday, March 10, 1964

8:00 a.m. Registration. Lobby floor.

9:00 a.m. Panel: Hits and Misses in Current Drug Therapy, Khorassan Room.
Moderator: Edward D. Kinsella, M.D., St. Louis.
Cancer Chemotherapy, C. Gordon Zubrod, M.D., Bethesda, Md.
The Use of Thyroid, Thyroxine and Triido-thyronine in the Treatment of Hypothyroidism and Other Conditions, Paul H. Lavietes, M.D., New Haven, Conn.
MAO Inhibitors, Their Use, Misuse and Therapeutic Effects, Nathan S. Kline, M.D., Orangeburg, N. Y.

9:00 a.m. Panel: Adolescent Medicine, Lido Room.
Adolescent Obesity: Metabolic or Psychologic? Felix P. Heald Jr., M.D., Washington, D. C.
Emotional Problems in Adolescence, Robert J. Corday, M.D., St. Louis.
Precocious Puberty, Willard M. Allen, M.D., St. Louis.

10:30 a.m. Intermission to View Exhibits.

Carl R. Ferris, M.D., Kansas City, presiding.

11:00 a.m. Anatomy of Experimentally Produced Hydrocephalus, M. D. Overholser, M.D., Columbia.
Missouri University Medical Award Winner.

11:30 a.m. Polyglandular Disease and Its Relationship to Peptic Ulcer, Edwin H. Ellison, M.D., Milwaukee, Wis.

12:00 noon University of Missouri Medical Alumni Association Luncheon, Zodiac Room.
Wyeth Hamlin, M.D., Hannibal, President, presiding.

1:30 p.m. Medical Economics Session, Khorassan Room.
The Problem of Hospital Costs.
Moderator: James P. Murphy, M.D., St. Louis.
Panelists:
Mr. Harry M. Piper, St. Louis, Administrator of St. Luke's Hospital.
Mr. John B. Warner Jr., St. Louis, Director of St. Louis University Hospitals.
Frank R. Bradley, M.D., St. Louis, Director Emeritus, Barnes Hospital.
Morris Alex, M.D., St. Louis.
Charles A. Nester, M.D., St. Louis.

3:00 p.m. Intermission to View Exhibits.

3:30 p.m. Panel: Treatment of Hiatus Hernia and Esophagitis, Lido Room.
Moderator: Hector W. Benoit Jr., M.D., Kansas City.
Panelists:
Donald B. Effler, M.D., Cleveland, Ohio.
Nicholas C. Hightower, M.D., Temple, Tex.
Richard Schatzki, M.D., Boston, Mass.

3:30 p.m. Panel: Long Term Management of Ischemic Heart Disease, Khorassan Room.
Moderator: Guy D. Callaway Jr., M.D., Springfield.
Coronary Arteriography: Clinical and Physiological Correlations, Richard S. Ross, M.D., Baltimore, Md.
Impending Myocardial Infarction, R. E. Beamish, M.D., Winnipeg, Canada.
Prophylactic Anticoagulent Therapy After Myocardial Infarction, Herbert E. Griswold Jr., M.D., Portland, Oregon.
Sponsored by the Missouri Heart Association.

5:45 to 7:15 p.m. St. Louis University Medical Alumni Reception, Stockholm Room.

6:00 to 7:15 p.m. Washington University Medical Alumni Reception, Coach Room.

7:30 p.m. Banquet in Honor of Past Presidents, Khorassan Room.
Kenneth C. Hollweg, M.D., Kansas City, President, presiding.
Speaker: Norman A. Welch, M.D., Boston, President-Elect, American Medical Association.

Wednesday, March 11, 1964

7:30 a.m. House of Delegates Breakfast Meeting, Chase Club.

How can JOHNSON'S Baby Lotion help the doctor, the mother and the baby?

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The doctor knows the young mother wants to do everything in her power to keep her baby clean and happy and in good health. And more and more evidence points to the fact that the physical expression of her love for her baby is not only a delight to the mother and pleasant for her child, but an essential element in the development of a mature, self-reliant adult.* A father as well as a physician, he knows that Johnson's Baby Lotion not only makes changing diapers easier and more pleasant for all concerned, but that the antibacterial effect of its hexachlorophene content (0.5%) persists for days, to protect the baby's delicate skin from rashes and infections. With Johnson's Baby Lotion normal skin functions are unaltered because the protective film is aqueous rather than occlusively oily. These are some of the reasons so many physicians recommend Johnson's Baby Lotion for routine use to protect delicate skin. May we send you samples of this superior antibacterial emollient in the convenient new plastic bottle?

*Donnelly, J.: A.M.A. Arch. Environmental Health 6:697, June, 1963

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DELEGATES

County Society	*Delegates*	*Alternates*
Andrew	Forrest Long, Savannah	Warren C. Baker, Savannah
Audrain	Harry F. O'Brien, Mexico	B. N. Jolly, Mexico
Barton-Dade	Herbert Arnold, Lamar	Thomas Carroll, Lamar
Barton-Dade		
Benton	James A. Logan, Warsaw	
Boone	James C. Cope, Columbia	Leroy J. Miller, Columbia
Boone	Hugh E. Stephenson, Columbia	Thomas W. Burns, Columbia
Boone	C. Thorpe Ray, Columbia	John T. Logue, Columbia
Buchanan	John N. Martin, St. Joseph	E. F. Butler, St. Joseph
Buchanan	Ernest E. Wadlow, St. Joseph	T. E. Potter, St. Joseph
Butler-Ripley-Wayne	Fred J. Biggs Jr., Poplar Bluff	E. T. Hansbrough, Poplar Bluff
Butler-Ripley-Wayne	Gene Leroux, Doniphan	Frank C. Johnson, Doniphan
Butler-Ripley-Wayne	Harold H. Cline, Piedmont	
Callaway	James Ritterbusch, Fulton	James Hill, Fulton
Cape Girardeau		
Carter-Shannon		
Carter-Shannon		
Chariton-Macon-Monroe-Randolph	F. L. Harms, Salisbury	D. D. Stuart, Brunswick
Chariton-Macon-Monroe-Randolph	James E. Campbell, Macon	Howard Miller, Macon
Chariton-Macon-Monroe-Randolph	F. A. Barnett, Paris	G. M. Ragsdale, Paris
Chariton-Macon-Monroe-Randolph	A. P. Rowlette, Moberly	Robert Hasson, Moberly
Clay	E. H. Fischer, N. Kansas City	Jas. W. Willoughby, Liberty
Clay	R. D. Dwyer, N. Kansas City	Paul Revare, N. Kansas City
Clinton	J. P. Mabrey, Plattsburg	P. T. Luckenbill, Plattsburg
Cole	G. D. Shull, Jefferson City	Byron Watts, Jefferson City
Cooper	G. W. Winn, Boonville	
Dallas-Hickory-Polk	O. A. Griffin, Buffalo	Evelyn Griffin, Buffalo
Dallas-Hickory-Polk		
Dallas-Hickory-Polk	Ben Koon, Bolivar	Geo. Robinson, Humansville
Dunklin	Joe A. Zimmerman, Kennett	George Dunmire, Kennett
Franklin-Gasconade-Warren	William Richardson, Union	James Shea, Gerald
Franklin-Gasconade-Warren	George M. Workman, Hermann	Paul Brenner, Owensville
Franklin-Gasconade-Warren	H. H. Schmidt, Washington	Harold Hoelscher, Warrenton
Grand River		
Caldwell	Frank Daley, Hamilton	Howard Carter, Hamilton
Livingston	Virgil Vandiver, Chillicothe	William Fair, Chillicothe
Grundy	Chester Clark, Trenton	A. Cross, Trenton
Davies	Fred Wilson, Winston	Larry Dowell, Pattonsburg
Harrison	W. A. Broyles, Bethany	G. P. Sutherland, Bethany
Linn	J. R. Dixon, Brookfield	George Gary, Marceline
Mercer	Frank Zahrt, Princeton	
DeKalb	James Sweiger, Maysville	
Carroll	E. W. Allen, Carrollton	R. Staton, Carrollton

County Society	Delegates	Alternates
Greene	Stanley S. Peterson, Springfield	Wm. C. Francis, Springfield
Greene	Edwin M. Powell, Springfield	M. J. Clarke, Springfield
Greene	Kenneth E. Knabb, Springfield	Robt. W. Maher, Springfield
Greene	William H. Snead, Springfield	H. J. McAlhany, Springfield
Henry	Shelby Hughes, Clinton	J. O. Smith, Clinton
Howard	Donald Wells, Glasgow	William A. Bloom, Fayette
Jackson	B. W. Andrews, Kansas City	Arthur Adelman, Kansas City
Jackson	John F. Bowser, Kansas City	Pat A. Barelli, Kansas City
Jackson	Philip L. Byers, Kansas City	J. L. Barnard Jr., Kansas City
Jackson	Dillard M. Eubank, Kansas City	Neil Berry, Kansas City
Jackson	Robert Forsythe, Kansas City	Richard Blim, Kansas City
Jackson	Harold Gainey, Kansas City	C. S. Cooper, Kansas City
Jackson	William W. Gist, Kansas City	H. V. Davis, Kansas City
Jackson	John A. Griffith Jr., Kansas City	John A. Flatley, Kansas City
Jackson	Wm. M. Kitchen, Kansas City	Fred D. Fowler, Kansas City
Jackson	Jas. R. McVay Jr., Kansas City	John B. Justus, Kansas City
Jackson	Gerald L. Miller, Kansas City	Ray. Keltner, Kansas City
Jackson	William C. Mixson, Kansas City	Geo. L. Lytton, Kansas City
Jackson	Ralph Perry, Kansas City	K. S. Nicolay, Kansas City
Jackson	Russell D. Shelden, Kansas City	Ira T. Smith, Kansas City
Jackson	A. Lloyd Stockwell, Kansas City	Harry Statland, Kansas City
Jackson	C. B. Wheeler Jr., Kansas City	C. L. Thompson, Kansas City
Jasper	M. Foster Whitten, Carthage	R. R. Cohle, Carthage
Jasper	G. A. Schulte, Joplin	Virgil Jeans, Joplin
Jefferson	F. L. Kozal, Crystal City	W. T. Judge, Crystal City
Johnson	Chas. M. Lederer, Warrensburg	
Lafayette-Ray	Joe Ward, Lexington	William LaHue, Lexington
Lafayette-Ray	George Davault, Richmond	Isadore Goldberg, Braymer
Lewis-Clark-Scotland	Landis Y. Davis, Canton	
Lewis-Clark-Scotland		
Lewis-Clark-Scotland	Earl E. Gilfillan, Memphis	
Lincoln-St. Charles	E. O. Damron, Elsberry	Louis Hetlage, Troy
Lincoln-St. Charles	Paul Rother, St. Charles	Robert Keller, Wentzville
Marion-Ralls-Shelby	Merrill J. Roller, Hannibal	D. B. Landau, Hannibal
Marion-Ralls-Shelby		
Marion-Ralls-Shelby		
Mid-Missouri		
Phelps	W. R. Lytle, Rolla	Barbara E. Russell, Rolla
Crawford	A. R. Bauman, Steelville	F. A. Elders, Cuba
Dent	B. J. Bass, Salem	M. M. Hart, Salem
Pulaski	Clyde Miller, Waynesville	
Maries		
Laclede	Rae W. Froelich, Lebanon	G. E. Fisher, Lebanon
Miller		
Mineral Area		
St. Francois	R. A. Huckstep, Farmington	C. H. Appleberry, Rivermines
Iron	Ben Bull, Ironton	William Patton, Ironton
Madison	M. Grossman, Fredericktown	C. Michaelis, Fredericktown
Washington	George Cresswell, Potosi	Tom Warren, Poplar Bluff
Reynolds		
Moniteau	Richard Fulks, California	K. S. Latham, California
Montgomery	E. J. T. Anderson, Montgomery City	S. J. Byland, Wellsville
Morgan	Jack Gunn, Versailles	J. L. Washburn, Versailles

County Society	*Delegates*	*Alternates*
Nodaway-Holt-Atchison-Gentry-Worth	E. D. Imes, Maryville	R. E. Dunshee, Maryville
Nodaway-Holt-Atchison-Gentry-Worth	J. Humphrey, Mound City	D. C. Perry, Mound City
Nodaway-Holt-Atchison-Gentry-Worth	E. L. Neidermeyer, Tarkio	W. Carpenter, Rock Port
Nodaway-Holt-Atchison-Gentry-Worth	A. L. Carlin, Stanberry	
Nodaway-Holt-Atchison-Gentry-Worth	Frank Matteson, Grant City	
North Central		
Adair	E. M. Grim, Kirksville	S. L. Freeman, Kirksville
Schuyler		
Knox	Francis Tarvydas, Edina	W. B. Isom, Knox City
Sullivan		
Putnam		
Ozarks		
Barry	W. J. Glass, Monett	Mary Newman, Cassville
Lawrence	Kenneth Glover, Mount Vernon	Allen Bailey, Mount Vernon
Stone	Fred Wommack, Crane	
Christian	Stanley Roper, Ozark	
Taney	Roy Gillespie, Branson	William Magness, Branson
Newton	Paul B. Anderson, Neosho	G. W. Blankenship, Neosho
McDonald		
Pemiscot	O. W. Cook, Caruthersville	Daniel Hensley, Lilbourn
Perry-Ste. Genevieve	O. A. Carron, Perryville	J. F. Fairchild, Perryville
Perry-Ste. Genevieve	J. Lutkewitte, Ste. Genevieve	G. H. DeGenova, Ste. Genevieve
Pettis	Gordon Stauffacher, Sedalia	A. L. Lowe, Sedalia
Pike	Lawrence Stuerman, Louisiana	R. F. Christensen, Louisiana
Platte	Sam Allen, Parkville	Albert Lewis, Platte City
St. Louis City	Henry C. Allen, St. Louis	D. A. Bindbeutel, St. Louis
St. Louis City	Robert B. Bassett, St. Louis	
St. Louis City	Richard V. Bradley, St. Louis	Edwin C. Ernst Jr., St. Louis
St. Louis City	John P. Eberle, St. Louis	Joseph C. Edwards, St. Louis
St. Louis City	William P. Gillespie, St. Louis	
St. Louis City	Charles Gulick, St. Louis	Ed. M. Cannon, St. Louis
St. Louis City	Walter T. Gunn, St. Louis	S. F. Hampton, St. Louis
St. Louis City	Leo J. Hartnett, St. Louis	C. Alan McAfee, St. Louis
St. Louis City	George L. Hawkins, St. Louis	
St. Louis City	Robert W. Kelley, St. Louis	Dallas J. Dyer, St. Louis
St. Louis City	David N. Kerr, St. Louis	Lee T. Ford Jr., St. Louis
St. Louis City	Edward D. Kinsella, St. Louis	John B. Shapleigh, St. Louis
St. Louis City	Louis H. Kohler, St. Louis	Richard L. Sterkel, St. Louis
St. Louis City	Warren M. Lonergan, St. Louis	Oliver E. Tjoflat, St. Louis
St. Louis City	J. Otto Lottes, St. Louis	V. T. Houston, St. Louis
St. Louis City	J. W. Berry, St. Louis	Robert E. Funsch, St. Louis
St. Louis City	Paul F. Max, St. Louis	Martin G. Austin, St. Louis
St. Louis City	William F. Melick, St. Louis	Joshua E. Jensen, St. Louis
St. Louis City	Albert M. Repetto, St. Louis	Louis T. Litzow, St. Louis
St. Louis City	M. S. Franklin, St. Louis	N. Knowlton Jr., St. Louis
St. Louis City	Charles S. Sherwin, St. Louis	Carl J. Dreyer, St. Louis
St. Louis City	Jerome I. Simon, St. Louis	Charles O. Metz, St. Louis
St. Louis City	Don C. Weir, St. Louis	John E. Byrne, St. Louis
St. Louis City	Herbert Wiegand, St. Louis	Louis E. Keller, St. Louis
St. Louis City	Charles R. Doyle, St. Louis	
St. Louis City	J. L. Lucido, St. Louis	Charles B. Ladd, St. Louis
St. Louis City	D. Elliott O'Reilly, St. Louis	W. C. MacDonald, St. Louis
St. Louis	James R. Nakada, St. Louis	R. E. Catanzaro, St. Louis

County Society	*Delegates*	*Alternates*
St. Louis	James C. Sisk, St. Louis	Jack R. Eidelman, St. Louis
St. Louis	William H. Bailey, St. Louis	M. G. Fingerhood, St. Louis
St. Louis	Edgar W. Davis, St. Louis	Ed. C. Holscher, St. Louis
St. Louis	Falls B. Hershey, St. Louis	Victor T. Jones, St. Louis
St. Louis	Richard A. Sutter, St. Louis	Allen P. Klippel, St. Louis
St. Louis	Maurice A. Diehr, St. Louis	Charles Miller Jr., St. Louis
St. Louis	Louis F. Howe, St. Louis	Hanford Phillips, St. Louis
St. Louis	Joseph B. Kendis, St. Louis	M. M. Schwartz, St. Louis
St. Louis	Robert A. Mayer, St. Louis	Miles C. Whitener, St. Louis
Saline	C. A. McBurney, Slater	E. Lee McCorkle, Marshall
SEMO		
Stoddard	Ralph Rehm, Bloomfield	Richard Comeau, Dexter
New Madrid	Samuel Sarno, Morehouse	Chas. Reeder, New Madrid
Mississippi	John Dernoncourt, Charleston	Robert Frazier, Charleston
Scott	A. P. Sargent, Sikeston	William O. Finney, Chaffee
South Central		
Howell	John E. Wilson, West Plains	H. Miller, Willow Springs
Oregon	C. W. Cooper, Thayer	A. T. Walker, Mammoth Springs, Ark.
Texas	Joe Wall, Houston	James A. Hasek, Cabool
Wright	R. W. Denney, Mountain Grove	
Douglas	Marvin Gentry, Ava	
Ozark		
Webster	T. M. Macdonnell, Marshfield	
West Central		
Bates	Arthur Hansen, Butler	Carter Luter, Butler
Cass	Edward Jones, Harrisonville	Alfred Eklund, Pleasant Hill
Cedar	R. Magee, El Dorado Springs	William Richter, Stockton
St. Clair	Donald Giesler, Osceola	Robert Brownsberger, Appleton City
Vernon	Rolla Wray, Nevada	Roy Pearse, Nevada

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MISSOURI SOCIETY OF MEDICAL TECHNOLOGISTS

Seventeenth Annual Convention

March 8, 9, 10, 11, 1964

March 8, 1964, Firmin Desloge Hospital, Miller Hall

2:00 p.m. Business Meeting, Missouri Society of Medical Technologists.
6:00 p.m. Buffet Supper, Cafeteria.
8:00 p.m. Business Meeting, Missouri Association of Blood Banks.

CHASE-PARK PLAZA HOTEL, STOCKHOLM ROOM

March 9, 1964, Missouri Association of Blood Banks

9:00 a.m. Invocation, Rev. J. Willis Averill, S.J., St. Louis.
9:05 a.m. Address of Welcome, Thomas J. Cooper, M.D., President, MABB.
9:10 a.m. The Resolution of Incompatible Crossmatches, Marjorie Stroup, M.T. (ASCP), Ortho Research Foundation, Raritan, N. J.
9:50 a.m. River of Life, Narrated by J. P. Soulier, M.D., Paris.
10:10 a.m. Coffee Break.
10:30 a.m. Lectins, Nancy Allen, B.A., Research Immunohematologist, Hyland Laboratories, Los Angeles.
11:15 a.m. 15-, 30-, or 60-Minute Incubations?, Sally Frank, M.T. (ASCP), B.B., Assistant Supervisor, Consultation Laboratories, Dade Reagents, Inc., Miami.
12:00 noon Question-Answer Panel. Moderator: Eugene F. Tucker, M.D., Director of Laboratories, St. Mary's Hospital, St. Louis.

Missouri Society of Medical Technologists

2:00 p.m. Address of Welcome, Marian Winter, M.T. (ASCP), President, MSMT.
2:05 p.m. Radiobiology, Armand E. Brodeur, M.D., Radiologist, Cardinal Glennon Memorial Hospital for Children, St. Louis.
2:45 p.m. Review of Thalassemia Major, Judith Callier, Student, St. Louis.
3:00 p.m. Coffee Break. View Exhibits.
3:30 p.m. A General Review of Aplastic Anemia, Diane Wulfert, Student, St. Louis.
3:45 p.m. (To be announced.)
6:30 p.m. Social Hour, Sponsored by Aloe Scientific.
7:30 p.m. Banquet, Stan Musial and Biggie's Restaurant, 5130 Oakland, St. Louis.

March 10, 1964

9:00 a.m. Laboratory Diagnosis of Viral Diseases, Lt. Col. Samuel T. Waid, Chief, Virology Division, 5th U. S. Army Medical Laboratory, St. Louis.
10:00 a.m. Coffee Break. View Exhibits.
10:30 a.m. Autoimmunity and Antibody Formation, R. William Burmeister, M.D., Associate Section Head, Unit II Medicine, St. Louis City Hospital, St. Louis.
11:30 a.m. Microbial Ecology in Man, Alex C. Sonnenwirth, Ph.D., Director, Division of Microbiology, Jewish Hospital; Assistant Professor, School of Medicine, Washington University, St. Louis.
2:00 p.m. (Subject to be announced), John P. Wyatt, M.D., Director and Professor, Department of Pathology, St. Louis University School of Medicine, St. Louis.
3:00 p.m. Coffee Break.
3:15 p.m. The Multiple Technic Concept: Its Application to Pulmonary Function, Vernon W. Fischer, B.S., M.T. (ASCP), Chief Histology Technician, St. Louis University, St. Louis.
3:45 p.m. Administrative and Personnel Problems in Medical Technology, W. I. Christopher, B.A., M.H.A., Director of Research and Personnel Services; Staff Assistant, Committee on Medical Technology, Catholic Hospital Association, St. Louis.
5:30 p.m. Sisters Dinner, Stan Musial and Biggie's Restaurant.

TECHNICAL EXHIBITS

Abbott Laboratories, North Chicago, Ill. Booth 6.
C. W. Alban & Co., St. Louis, Mo. Booth 38.
Aloe, Division of Brunswick Corp., St. Louis, Mo. Booth 8.
American Medical Association, Chicago, Ill. Booth 20A.
Arnar-Stone Laboratories, Inc., Mount Prospect, Ill. Booth 25.
Astra Pharmaceutical Products, Inc., Worcester, Mass. Booth 45.
Automatic Medical Systems of Missouri, Inc., Omaha, Nebr. Booth 16.
Ayerst Laboratories, New York, N. Y. Booth 9.
Ciba Pharmaceutical Company, Summit, N. J. Booth 7.
The Coca-Cola Company, Atlanta, Ga. Booth 20.
Dome Chemicals, Inc., New York, N. Y. Booth 50.
Donley-Evans & Co., St. Louis, Mo. Booth 48.
The Doyle Pharmaceutical Company, Minneapolis, Minn. Booth 47.
Dumas-Wilson & Co., St. Louis, Mo. Booth 2.
Eli Lilly and Company, Indianapolis, Ind. Booth 39.
The Emko Company, St. Louis, Mo. Booth 42.
Encyclopaedia Britannica, Chicago, Ill. Booth 43.
Geigy Pharmaceuticals, Yonkers, N. Y. Booth 49.
Hamilton-Schmidt Surgical Co., St. Louis, Mo. Booth 23.
Maico Company, Inc., St. Louis, Mo. Booth 33.
Mead Johnson Laboratories, Evansville, Ind. Booth 41.
Medco Products Company, Tulsa, Okla. Booth 28.
Medical Arts Services, Inc., St. Louis, Mo. Booth 29.
The Medical Protective Co., Fort Wayne, Ind. Booth 3.
Merck Sharp & Dohme, West Point, Pa. Booth 15.
Milex Professional Specialties, Peoria, Ill. Booth 27.
Miller Pharmacal Company, Inc., St. Louis, Mo. Booth 36.
McNeil Laboratories, Inc., Fort Washington, Pa. Booth 37.
The National Drug Company, Philadelphia, Pa. Booth 18.
Organon, Inc., West Orange, N. J. Booth 24.
Parke, Davis & Company, Detroit, Mich. Booth 34.
Pepsi-Cola Bottlers of St. Louis, St. Louis, Mo. Booth 26.
Pfizer Laboratories, New York, N. Y. Booth 46.
Professional Management Midwest, Kansas City, Mo. Booth 5.
Roche Laboratories, Nutley, N. J. Booth 31.
William H. Rorer, Inc., Fort Washington, Pa. Booth 44.
St. Louis Blue Shield, St. Louis, Mo. Booth 4.
St. Louis Flying Service, Inc., St. Louis, Mo. Booth 12.
Sanborn Company, Waltham, Mass. Booth 35.
Sandoz Pharmaceuticals, Hanover, N. J. Booth 13.
W. B. Saunders Company, Philadelphia, Pa. Booth 11.
G. D. Searle & Co., Chicago, Ill. Booth 22.
Smith Kline & French Laboratories, Philadelphia, Pa. Booth 32.
E. R. Squibb & Sons, New York, N. Y. Booth 14.
The Stuart Co., Pasadena, Calif. Booth 1.
The Upjohn Company, Kalamazoo, Mich. Booth 40.
U. S. Vitamin & Pharmaceutical Corp., New York, N. Y. Booth 30.
Wallace Laboratories, Cranbury, N. J. Booth 17.
Warner-Chilcott Laboratories, Morris Plains, N. J. Booth 19.
Warren-Teed Pharmaceuticals, Inc., Columbus, Ohio. Booth 10.
Westwood Pharmaceuticals, Buffalo, N. Y. Booth 21.

March 11, 1964

9:00 a.m. Biochemical Changes After Death, George E. Gantner, M.D., Director of Laboratories, Firmin Desloge Hospital, St. Louis.
9:45 a.m. Freezing Point Osmometry, Mary Jean Rutherford, B.S., M.T. (ASCP), Laboratory Supervisor, Firmin Desloge Hospital, St. Louis.
10:00 a.m. Coffee Break. View Exhibits.
10:30 a.m. Evaluation of Enzyme Techniques Used in Clinical Laboratories, Sam Frankel, Ph.D., Director, Division of Biochemistry, Jewish Hospital, St. Louis.
11:30 a.m. Procedure Management in Clinical Enzyme Chemistry, Lawrence C. Whetzel, B.S., Supervisor, Chemistry Laboratory, Dade Reagents, Inc., Miami.

County Society News

FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

Buchanan County Medical Society

Sixty-six physicians attended the January 8 meeting of the Buchanan County Medical Society in the Empire Room of Hotel Robidoux. A meeting and scientific program followed 6:30 dinner. Dr. William B. Rost, president, presided. The speaker was introduced by Dr. F. Gregg Thompson, III.

The speaker was Dr. Leslie Rudolf, Associate Professor of Surgery at the University of Virginia, who spoke on "Organ Transplant." The number of successful organ transplants remains small, the audience was informed, though progress is being made. Many great problems still face the surgeons who attempt organ transplant, including the resistance of the body to "foreign" transplants; the vulnerability of the recipient to disease because of the necessity of using medicines to reduce the activity of antibodies also reduce resistance to disease; tremendous problems of securing the use of organs suitable for transplant. Even so transplants are being made with slow but steady increasing success. The program was sponsored by the Phillips Roxane Company.

Irwin Rosenthal, M.D., *Secretary*

Grand River Medical Society

Forty-two members and guests were present at the combined meeting with the Woman's Auxiliary which convened at 6:30 p.m. at the Strand Hotel in Chillicothe on Thursday night, January 9. Following a social hour and dinner the ladies held a separate, informative program on "A Display and Discussion of Antiques" by Mrs. Oliver Duffy of Trenton.

Robert Forsyth, M.D., neurosurgeon of Kansas City, spoke to the doctors on, "Signs and Symptoms of Central Nervous System Diesease and Injury." Important subdivisions of the subject were head injury, convulsions, disuse of the extremities and pain. Additional useful information was added during the question and answer period.

Delegates and alternates to the March meeting of the MSMA were elected. All doctors and wives of the First Councilor District are to be invited to the June meeting if plans to obtain a legislator as speaker are successful. A motion by Dr. Donald Dowell to assess each member $10.00 to finance a Hospitality Room in St. Louis at the state meeting was passed. It was agreed that if children other than those of members took part in the proposed Children's Day Program in March, the social hour would be dispensed with for that meeting.

New members Albert Shiffet, M.D., of Wheeling and M. L. Gentry, M.D., of Chillicothe, were welcomed into the Society. Guests present were: Robert Forsyth, M.D., Kansas City; Dr. Gisela Betz, Munich, Germany; Mrs. Alma Kincaid, Los Angeles, Calif.; Mrs. Oliver Duffy, Trenton and representatives of Squibb and Lederle.

Jack Vinyard, M.D., *Secretary*

SECOND DISTRICT

HARRY L. GREEN, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

Kenneth C. Hollweg, M.D., Kansas City, president of the Missouri State Medical Association, spoke before the Chariton-Macon-Monroe-Randolph County Medical Society at its regular monthly dinner meeting Thursday night, January 9, at the Woodland Hospital in Moberly. Dr. Hollweg spoke on the organizational setup of the MSMA, discussing the county medical societies and their function, the committee structure, and their functions, of the State Association, and briefly built up in his discussion to the AMA.

Drs. J. Will Fleming, Hollweg, T. S. Fleming, Mrs. Hollweg and Dr. Baker were seated at the head table.

A business session of the Society followed Dr.

Dr. Barnett discussed the oral polio vaccine program.

Hollweg's interesting presentation. The Sabin Oral Polio program to begin on Sunday, February 9, was discussed by the various county chairmen, namely: W. D. Chute, M.D., of Randolph; T. L. Harms, M.D., of Chariton; James Campbell, M.D., of Macon, and F. A. Barnett, M.D., of Monroe. The chairmen felt that the project would be well handled in their respective counties on the February 9 date. The two additional dates for the giving of the vaccine have been scheduled for March 15 and April 19 making a total of three feedings. In addition to Dr. Hollweg other guests present were: Mrs. Hollweg and Mr. Ray McIntyre, Field Secretary of the MSMA. The members present were: Drs. D. E. Eggleston and J. E. Campbell, Macon County; Dr. F. L. Harms, Chariton County; Dr. F. A. Barnett, Monroe County; Drs. Josephine Baker, A. P. Rowlette, J. Will Fleming Jr., Thomas S. Fleming, W. D. Chute, C. C. Cohrs, L. E. Huber, Robert Hasson, P. V. Dreyer and S. R. Szymanski, Randolph County.

J. WILL FLEMING JR., M.D., *Secretary*

FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

LINCOLN-ST. CHARLES COUNTY MEDICAL SOCIETY

A dinner meeting of the Lincoln-St. Charles County Medical Society was held at the Southern Air in Wentzville on Tuesday evening, January 28. A social hour preceded dinner and the program. William Shieber, M.D., surgeon of St. Louis, spoke to the group on "Implications of the Lymphatic System in Clinical Practice."

His talk was well illustrated with slides. A question and answer period following the formal presentation brought forth additional interesting

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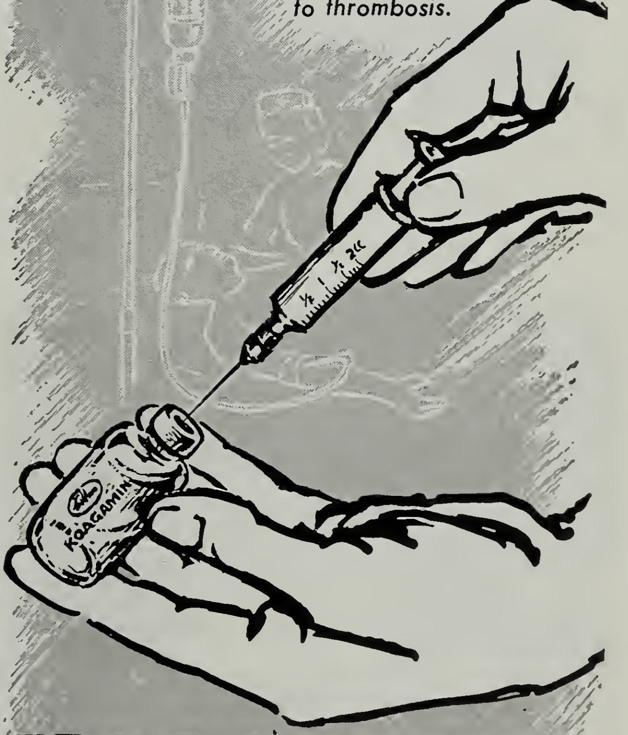

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points relating to this particular subject. Twenty-one physicians were present to profit from this meeting. In addition to Dr. Shieber, other guests were Dr. Paul Whitener, St. Louis County, Councilor of the Fourth District of the MSMA, and Mr. Ray McIntyre, Field Secretary of the MSMA.

During the business part of the meeting Dr. Whitener spoke briefly on matters to come before the House of Delegates at the coming state meeting. Some time was given to discussion of the Missouri State Medical Foundation, its objectives and present status. Dr. R. E. Hammes of St. Charles, General Chairman for the oral polio vaccine program for Lincoln and St. Charles Counties, discussed in general the outline for this program which will be staged on Sunday, March 15 and again on Sunday, May 17. The trivalent polio vaccine is to be offered these two days to the general public in the two counties. Further details of the program will be worked out and will be made known in the near future.

R. J. Fleming, M.D., *Secretary*

SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

Henry, Johnson, Pettis, Saline, Lafayette-Ray County Medical Societies

A joint dinner meeting of the Henry, Johnson, Pettis, Saline, Lafayette-Ray and adjacent county medical societies and the doctors' wives was held at the Pacific Cafe in Sedalia on Wednesday night, January 15. More than 60 people were present to enjoy an evening of fellowship, good food and excellent programs.

More than 60 doctors, wives and guests attended the meeting.

Following the social hour and dinner, the ladies were excused to hold a separate meeting where they were treated to a special program.

Drs. Stauffacher and Lewis, Lt. Col. Kloess and Dr. Hopkins got together at the close of the meeting.

The scientific program for the doctors was given by J. Eugene Lewis Jr., M.D., St. Louis, associate professor of clinical surgery, St. Louis University Medical School and Chief, Surgical Section, Cardinal Glennon Memorial Hospital for Children. Dr. Lewis spoke on "Diagnosis and Management of Surgical Problems in the Newborn." His was an interesting and informative presentation and stimulated considerable general discussion following his formal talk. A number of doctors and their wives from the Whiteman Air Force Base were present and most welcome.

At the close of the evening session, Lt. Col. Edward J. Kloess, Commander of the 805th Medical Group at the Whiteman Air Force Base, invited the group to hold their usual May meeting at the Air Force Base on whatever Wednesday night in that month seemed most suitable. The invitation was unanimously accepted and the specific date of the meeting at the base will be determined in the near future.

Elliott M. Braverman, M.D., *Secretary*
Pettis County Medical Society

West Central Missouri Medical Society

The January meeting of the West Central Missouri Medical Society and the doctors' wives was held at the Wagon Wheel Restaurant in Harrisonville on Thursday evening, January 9. The evening festivities began with a social hour at 6:30 p.m. followed by dinner and then the scientific program.

David R. Weakley, M.D., dermatologist of Kansas City, associate professor of dermatology at Kansas University Medical School, spoke to the group on "The Medical Management of Skin

Problems in General Practice—With Slide Illustrations. This was an interesting and practical presentation and the Society is indebted to Dr. Weakley for this program.

ROY PEARSE, M.D., *Secretary*

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

The monthly meeting of the Lafayette-Ray County Medical Society was held at Maib's Cafe in Lexington on January 14. The social hour was followed by the dinner. A short business meeting was held, presided over by President Wilbur Fulkerson, M.D., and a rather lively discussion ensued as to methods of increasing attendance at each meeting.

A motion was made and passed that a program chairman be appointed to be responsible for a monthly program, and that he also invite other area physicians to each meeting. Drs. George DeVault and Charles Riley were appointed to the program committee.

No further business ensued, and the meeting adjourned.

W. C. LAHUE, M.D., *Secretary*

EIGHTH DISTRICT

DOYLE C. MCCRAW, BOLIVAR, COUNCILOR

OZARKS MEDICAL SOCIETY

The January meeting of the Ozarks Medical Society was held at the Lakeland Restaurant in Monett. The scientific program was presented by Lewis Ferguson, M.D., surgeon of Joplin, on the subject, "Intestinal Obstruction."

At the Society's meeting in December, held at Mount Vernon, officers for 1964 were elected as follows: Alan Bailey, M.D., Mount Vernon, president; William Hamilton, M.D., Aurora, vice president, and Paul B. Anderson, Neosho, secretary-treasurer. Also at the December meeting, Dr. L. A. Marty of Pierce City was voted an honorary member of the Society and Dr. Wilbur McDabbs of Neosho was voted a new active member.

PAUL B. ANDERSON, M.D., *Secretary*

NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

MID-MISSOURI COUNTY MEDICAL SOCIETY

The Mid-Missouri Medical Society and the doctors' wives held a dinner meeting at the Shep-

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- **plus meprobamate to decrease anxiety and tension**

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Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

CML-1055

MILTRATE®
meprobamate 200 mg. + pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

herd of the Hills Motel Restaurant in Lebanon on Thursday night, January 23.

Following an enjoyable social hour and dinner, those present were privileged to hear a most interesting and informative discussion on "The Practice of Medicine and Its Relation to the Missouri Division of Health," by H. M. Hardwicke, M.D., Jefferson City, Acting Director, Missouri Division of Health.

M. K. Underwood, M.D., *Secretary*

TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

Butler-Ripley-Wayne County Medical Society

A dinner meeting of the Butler-Ripley-Wayne County Medical Society was held at the Hickory House in Poplar Bluff on Wednesday evening, January 22. The scientific program was presented by Mitchell V. Malinoski, M.D., Veterans Hospital, Poplar Bluff, who spoke on "Histamine Cephalalgia."

W. D. Robertson, M.D., *Secretary*

Mineral Area County Medical Society

A meeting of the Mineral Area Medical Society was held at the State Hospital in Farmington January 23. The meeting opened with a presentation on "Tests and Treatment for Pancreatic Disease" by William A. Knight Jr., M.D., of St. Louis University.

Members attending included: Drs. C. H. Appelbury, Ben Bull, T. R. Burcham, Jack Foster, Emmett Hoctor, Robert Huckstep, C. E. Michaelis, Van W. Taylor, Jack Mullen, C. E. Carleton, C. W. Chastain, Paul Dennis, Marvin A. Grossman, Marvin Haw, Alvin Karraker, William Patton and G. L. Watkins.

Following the reading of the minutes the present status of operation Hometown was discussed. Dr. Bull pointed out that Representative Ichord had polled the people of his, the eighth, congressional district and found that some 60 per cent of the people polled opposed King-Anderson Bill, whereas some 30 per cent were in favor of it. Discussion was then had concerning the advantages of non-medical people contacting Congressman Jones and Congressman Ichord, emphasizing the disadvantages of the King-Anderson Bill.

Discussion of the drug list available through the State Welfare Department for dispensing to welfare patients was then held and it was felt that the selection was poor and that the availability of the list of drugs was worse. Several doctors related that their patients had found it impossible to obtain the particular drug from the pharmacies which were supposed to be participating in the program.

The decision to disaffiliate Ste. Genevieve County from the Mineral Area Medical Society and for it to affiliate with Perry County was reviewed by the membership and no opposition was voiced. Correspondence from the AMA and a variety of other organizations was reviewed and it was felt that no further action was needed at this time.

Delegates to the State Medical Association convention were named as follows: For Madison County, M. A. Grossman; for Iron County, William Patton; for Washington County, George Cresswell, and for St. Francois County, Robert A. Hickstep with Homer Appleberry as alternate.

Discussion of the forthcoming oral polio immunization drive in St. Francois County brought out that most members favor the use of the trivalent vaccine, if this is found to be economically feasible in the area. There was, however, no opposition to the use of the monovalent. The group reiterated their support for the program. It was thought that it should be the responsibility of the local program sponsors in each community to arrange their medical coverage.

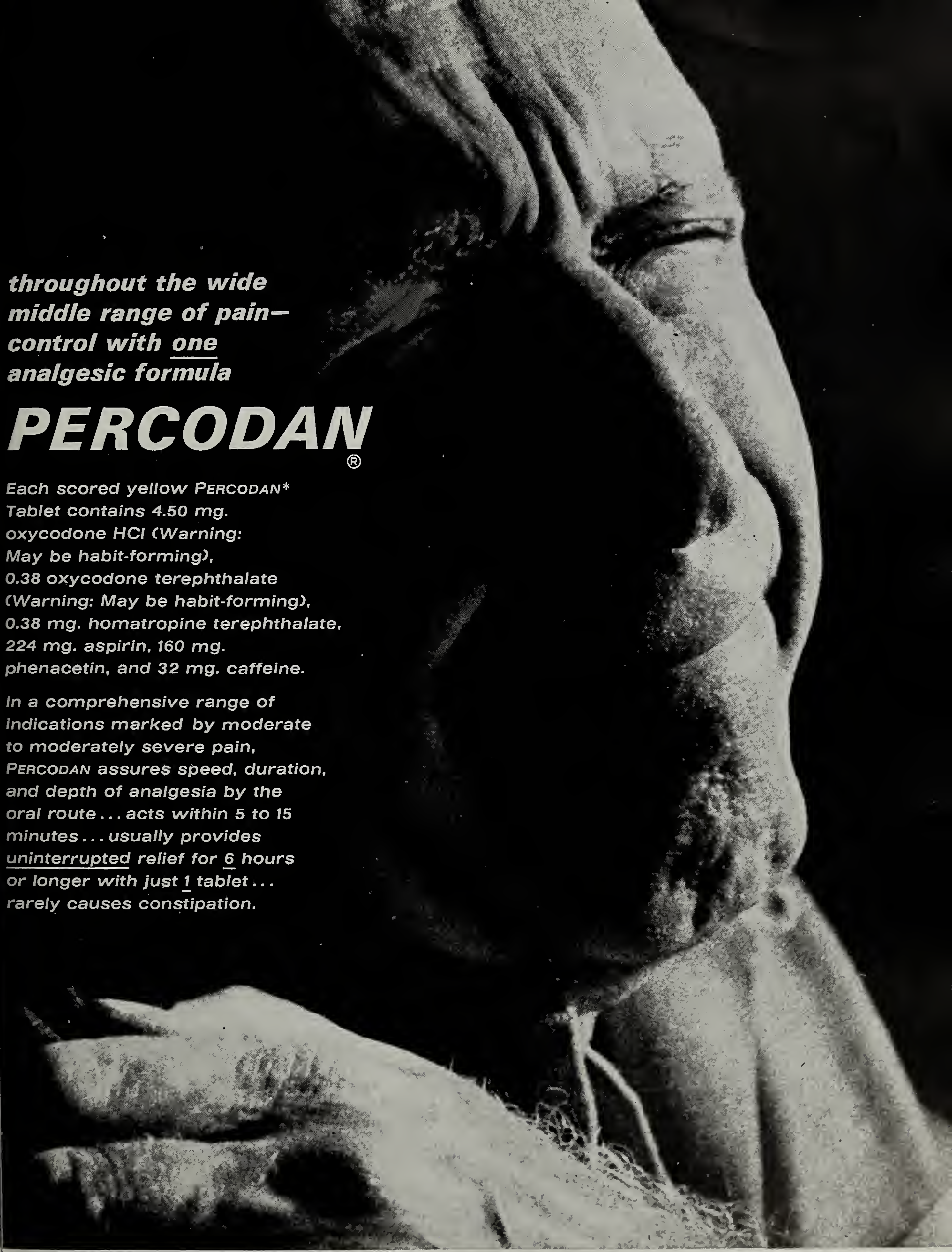
The annual election of officers was then held. George A. Oliver was nominated and elected unanimously for president. C. E. Michaelis was nominated and elected unanimously for vice president and C. W. Chastain continues his two year term as treasurer and secretary.

C. W. Chastain, M.D., *Secretary*

Perry-Ste. Genevieve County Medical Society

A dinner meeting of the new Perry-Ste. Genevieve County Medical Society, at which the Charter from the MSMA was presented, was held at the Ste. Genevieve Hotel on Thursday night, January 23. This was a historic occasion inasmuch as all 10 active charter members of the new Society were present. The attendance of the doctors' wives added to the importance of the occasion.

The evening festivities began with an enjoyable social hour followed by an excellent dinner and then the ceremonies suitable to the occasion. O. A. Carron, M.D., Perryville, president, presided. In addition to the doctors' wives other guests included W. D. English, M.D., Councilor of the 10th District of the MSMA from Kennett,



throughout the wide middle range of pain—control with one analgesic formula

PERCODAN®

Each scored yellow PERCODAN Tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit-forming), 0.38 oxycodone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.

Average Adult Dose—1 tablet every 6 hours. **Precautions, Side Effects and Contraindications**—The habit-forming potentialities of Percodan are somewhat less than those of morphine and somewhat greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Although generally well tolerated, Percodan may cause nausea, emesis, or constipation in some patients. Percodan should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** Percodan®-Demi, containing the complete Percodan formula but with only half the amount of salts of oxycodone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** ENDO LABORATORIES Richmond Hill 18, New York

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*U. S. Pats. 2,628,185 and 2,907,768

Dr. Carron received the new charter from Dr. English.

Mr. and Mrs. T. R. O'Brien and Mr. and Mrs. Ray McIntyre of St. Louis.

Following dinner the president introduced the guests and then called on Dr. English to speak to the group. Dr. English complimented the members of the new Society in their coming together into one medical group so that they might be more effective in the area in promoting the health of the people and the betterment of the medical profession. He pointed out that the size of the Society was not the important thing, but the interest and willingness to work together for the good of all. After his brief remarks, Dr. English presented the new charter for the Perry-Ste. Genevieve County Medical Society issued in behalf of the MSMA to Dr. Carron. Mr. O'Brien and Mr. McIntyre were introduced and both spoke briefly.

Charter members posed with Councilor English.

The charter for the Society was dated as of December 17, 1963, and signed by John I. Matthews, M.D., Secretary and Kenneth C. Hollweg, M.D., President, respectively of the MSMA. The date of December 17 was the organizational meeting of the new Society and the termination of the old Perry County Society. Approval for hyphenation of the two counties was given by the Council of the MSMA at its meeting on the weekend of December 7 and 8, 1963. The active charter members of the Perry-Ste. Genevieve Society are: Drs. Oscar A. Carron, Perryville; Gerard H. DeGenova, Ste. Genevieve; James Fairchild, Perryville; Lawrence W. Feltz, Perryville; Theodore Fischer, Altenburg; Richard C. Lanning, Ste. Genevieve; Stanley G. Legner, Perryville; Joseph F. Lutkewitte, Ste. Genevieve; Alfred E. McDermott, Perryville, and William Utterman, Perryville.

Dinner preceded the ceremonies.

The officers are O. A. Carron, M.D., Perryville, president; R. C. Lanning, M.D., Ste. Genevieve, vice president; and Joseph F. Lutkewitte, Ste. Genevieve, secretary-treasurer.

Joseph F. Lutkewitte, M.D., *Secretary*

Post-Graduate Program

"THE PHYSIOLOGICAL BASIS FOR DIAGNOSIS AND TREATMENT OF DISEASE"

Co-Sponsors
Department of Internal Medicine
St. Louis University School of Medicine
and
Missouri State Medical Association

St. Louis University Hospitals
Firmin Desloge Hospital
Miller Hall

Wednesday, March 11, 1964

Morning Session—Goronwy O. Broun Sr., M.D., Dean, St. Louis University School of Medicine—Presiding.

10:00 New Concepts of Parathyroid Function in Clinical Disease
Thomas F. Frawley, M.D., Professor of Medicine; Director, Department of Internal Medicine
10:30 The Basis of Therapy of Diabetes Mellitus
Henry E. Oppenheimer, M.D., Associate Professor of Clinical Medicine
11:00 Recent Trends in the Study of Iron Metabolism
Neil I. Gallagher, M.D., Assistant Professor of Medicine
11:30 Newer Concepts of the Disorders of Iron Metabolism
Goronwy O. Broun Jr., M.D., Assistant Professor of Medicine
12:00 General Discussion
12:30 Lunch—Firmin Desloge Hospital Cafeteria

Afternoon Session—Ralph A. Kinsella Sr., M.D., Professor Emeritus, Department of Internal Medicine—Presiding.

1:30 Pathophysiology and Therapy in Chronic Pulmonary Insufficiency
Herbert C. Sweet, M.D., Professor of Clinical Medicine
2:00 Evaluation of the Hypertensive Patient
James G. Janney Jr., M.D., Associate Professor of Clinical Medicine
2:30 Antibiotics and Host Response in the Management of Infectious Disease
R. William Burmeister, M.D., Instructor in Internal Medicine
3:00 The Malabsorption Syndrome
Guy E. Van Goidsenhoven, M.D., Assistant Professor of Medicine
3:30 General Discussion

Registration Fee—$10.00, includes lunch

Send Inquiries to: W. A. Knight Jr., M.D.
Department of Internal Medicine
St. Louis University School of Medicine
1325 South Grand Blvd.
St. Louis 4, Missouri

New Members

Rea Beck, M.D., 4316 B. McAdoo Court, Mehlville, has become a member of St. Louis County Medical Society. Dr. Beck is a native of Quincy, Ill., received her preliminary education at Washington University, and her M.D. degree at Missouri University in 1961. She specializes in chest diseases.

Charles P. Blunt, M.D., 60 Plaza Square, St. Louis, has become a member of St. Louis County Medical Society. Dr. Blunt is a native of Lynchburg, Va., received his preliminary education at Lynchburg College, and his M.D. degree at Virginia Medical College in 1943. He specializes in surgery.

Katherine S. Brown, M.D., 1304 Vine St., Fulton, has become a member of Callaway County Medical Society. Dr. Brown is a native of Gordo, Ala., received her preliminary education at Huntingdon College, and her M.D. degree at Washington University in 1934. She specializes in anesthesiology.

George S. Devins, M.D., 4949 Rockhill Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Devins is a native of Kansas City, received his preliminary education at Rockhurst College, and his M.D. degree at the University of Kansas in 1962. He specializes in internal medicine.

Marvin F. Goldstein, M.D., 751 E. 63rd St., Kansas City, has become a member of Jackson County Medical Society. Dr. Goldstein is a native of Kansas City, received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1959. He specializes in ophthalmology.

Joe S. Gunter, M.D., 902 Edmond St., St. Joseph, has become a member of Buchanan County Medical Society. Dr. Gunter is a native of Dallas, Tex., received his preliminary education at Southern Methodist University, and his M.D. degree at Southwest University in 1951. He specializes in urology.

Charles E. H'Doubler, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. H'Doubler is a native of Springfield, Mo., received his preliminary education at Arkansas University, and his M.D. degree at Tulane University in 1957. He specializes in surgery.

Joseph W. Hoard, M.D., 129 E. Kirkham Road, Webster Groves, has become a member of St. Louis County Medical Society. Dr. Hoard is a native of St. Louis, received his preliminary education at Lincoln University, and his M.D. degree at Meharry Medical College in 1952. He specializes in internal medicine.

Sumner Holtz, M.D., 950 Francis Place, St. Louis, has become a member of St. Louis County Medical Society. Dr. Holtz is a native of Haverhill, Mass., received his preliminary education at Tufts College, and his M.D. degree at St. Louis University in 1948. He specializes in radiology.

Johannes W. Hulstra, M.D., 1211 S. Glenstone St., Springfield, has become a member of Green County Medical Society. Dr. Hulstra is a native of Apeldoorn, Holland, received his preliminary education at Gymn. Apeldoorn, Holland, and his M.D. degree at Rijks-Universiteit te Leiden Faculteit der Geneeskunke, Netherlands, in 1954. He specializes in psychiatry.

Alan G. Johnson, M.D., 57 Chafford Woods, St. Louis, has become a member of St. Louis County Medical Society. Dr. Johnson is a native of Boone, Iowa, received his preliminary education at Oberlin College, and his M.D. degree at Washington University in 1956. He specializes in psychiatry.

Carlyn M. Kline, M.D., 17 Stonecrest, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Kline is a native of Milwaukee, Wis., received his preliminary education at the University of Wisconsin, and his M.D. degree at the University of Wisconsin in 1956. He specializes in general practice.

Albert G. Lewis, M.D., Platte Medical Clinic, Platte City, has become a member of Platte County Medical Society. Dr. Lewis is a native of Midway, Ala., received his preliminary education at the University of Alabama, and his M.D. degree at Jefferson Medical College in 1945. He specializes in internal medicine.

Arthur B. Lissner, M.D., 6944 Chippewa St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Lissner is a native of New York, N. Y., received his preliminary education at the University of Omaha, and his M.D. degree at Jefferson Medical College in 1955. He specializes in plastic surgery.

Wallace S. Marsh, M.D., 8630 N. Oak St., Kansas City, has become a member of Clay County Medical Society. Dr. Marsh is a native of Minneapolis, Minn., received his preliminary education at the University of Omaha, and has

M.D. degree at the University of Nebraska in 1962. He specializes in general practice.

F. James Marston Jr., M.D., 902 Edmond St., St. Joseph, has become a member of Buchanan County Medical Society. Dr. Marston is a native of Boonville, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at the University of Louisville in 1955. He specializes in obstetrics and gynecology.

Richard B. Oglesby, M.D., 950 Francis Place, St. Louis, has become a member of St. Louis County Medical Society, Dr. Oglesby is a native of Atlanta, Ga., received his preliminary education at Washington University, and his M.D. degree at Washington University in 1958. He specializes in ophthalmology.

Allen G. Parleman, M.D., 701 E. 63rd St., Kansas City, has become a member of Jackson County Medical Society. Dr. Parleman is a native of Kansas City, received his preliminary education at Washington University, and his M.D. degree at Washington University in 1959. He specializes in ophthalmology.

R. W. Penick, M.D., 12501 Maret Drive, St. Louis, has become a member of St. Louis County Medical Society. Dr. Penick is a native of Madison, Ga., received his preliminary education at Emory University, and his M.D. degree at the University of Georgia in 1949. He specializes in pediatrics.

E. Robert Schultz, M.D., 3252 January St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Schultz is a native of Cape Girardeau, Mo., received his preliminary education at S. E. Missouri State College, and his M.D. degree at Washington University in 1953. He specializes in neurology and psychiatry.

Bernd Silver, M.D., 1332 Grand Dr., St. Louis, has become a member of St. Louis County Medical Society. Dr. Silver is a native of Essen, Germany, received his preliminary education at the University of Louisville, and his M.D. degree at the University of Louisville in 1956. He specializes in ophthalmology.

C. Franklin Smith, M.D., Rt. 3, Willow Springs, has become a member of South Central County Medical Society. Dr. Smith is a native of Fremont, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1960. He specializes in general practice.

Jim R. Waterfield, M.D., 1211 S. Glenstone St., Springfield, has become a member of Greene County Medical Society. Dr. Waterfield is a native of Moberly, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at Washington University in 1956. He specializes in internal medicine.

Newton B. White, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. White is a native of Chicago, Ill., received his preliminary education at Miami University, and his M.D. degree at the University of Cincinnati in 1957. He specializes in orthopedics.

S. Dwight Woods, M.D., 4320 Wornall Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Woods is a native of Tyro, Kan., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1955. He specializes in surgery.

DEATHS

Northup, Glenn R., M.D., St. Louis, a graduate of Hahnemann Medical College, 1923; member of St. Louis Medical Society; aged 72; died January 7, 1964.

Barker, Jesse W., M.D., St. Louis, a graduate of the University of Kansas City, 1900; member of St. Louis Medical Society; aged 92; died January 8, 1964.

Richardson, Reginald G., M.D., Jefferson City, a graduate of Howard University, 1915; member of Cole County Medical Society; aged 84; died January 8, 1964.

Seeley, J. Bradford, M.D., Independence, a graduate of the University of Michigan, 1916; member of Jackson County Medical Society; aged 72; died January 10, 1964.

Munsch, Augustus P., M.D., St. Louis, a graduate of Jefferson College, 1903; member of St. Louis Medical Society; aged 85; died January 13, 1964.

Burford, E. Humber, M.D., Ladue, a graduate of Washington University, 1934; member of St. Louis Medical Society; aged 55; died January 19, 1964.

Dickson, Frank D., M.D., Kansas City, a graduate of the University of Pennsylvania, 1905; member of Jackson County Medical Society; aged 82; died January 19, 1964.

Clark, J. F. W., M.D., University City, a graduate of Harvard University, 1920; member of St. Louis Medical Society; aged 70; died January 25, 1964.

Gibbons, Edward H., M.D., St. Louis, a graduate of the University of Buffalo, 1926; member of St. Louis Medical Society; aged 66; died February 1, 1964.

FINANCIAL STATEMENT FOR THE YEAR 1963

LENNERTSON & COMPANY

CERTIFIED PUBLIC ACCOUNTANTS
214 South Bemiston Avenue

ST. LOUIS, MISSOURI 63105

January 28, 1964

Missouri State Medical Association,
634 North Grand Blvd.,
St. Louis, Mo.

Gentlemen:

An examination has been made of the accounts of the Missouri State Medical Association, a non-profit Missouri corporation, for the year 1963 and a report thereon is presented together with the following exhibits:

Exhibit A	Balance Sheet
Exhibit B	Income Statement
Exhibit C-1	Statement of Investments
Exhibit C-2	Statement of Committee and Meeting Expense
Exhibit D	Dues Receivable and Membership by Societies

It should be noted that members' dues are taken into income on the cash basis whereas the other accounts are maintained on the accrual basis. Items paid in advance are shown as prepaid and carried forward to the year to which they apply.

Scope of Examination

The Balance Sheet at December 31, 1963 and the Income Statements for the year then ended were reviewed. Examinations or tests were made of the accounting records, in the manner and to the extent deemed appropriate, without making a detailed audit of the transactions.

Recorded cash receipts for the year were traced in total into the bank as deposits and disbursements for the period were substantiated by an inspection of paid checks, purchase invoices and other data on file.

Income Statement

The financial result of the activities of the Association for the year 1963 was an excess of income over expenses of $8,370.41 as set forth in Exhibit B. Exhibit C-2 presents a summary of committee and meeting expenses for the year.

Selective tests were made of the income and expense accounts for the period. It was noted that space in The Journal was contributed to the United States Treasury Department for bond advertising, to members and widows of members for small classified ads and to the Missouri State Medical Foundation.

Balance Sheet

The financial position of the Association at December 31, 1963 is presented in Exhibit A. Comments on the larger Balance Sheet accounts follow:

Cash in banks, as shown by the books, was reconciled with the regular monthly bank statements and confirmations received from the depositaries. The petty cash fund was verified by physical count.

Investments with a cost of $112,335.30 were confirmed by a statement from the custodian, Mercantile Trust Company. Investment income for the year consisted of the following:

Interest and Discount on Bonds	$3,013.48
Dividends on Stock	983.70
Total Investment Income	$3,997.18

Accounts Receivable of $3,943.53 represent the unpaid balance due from Advertisers. Of this amount $3,846.53 was due from the State Journal Advertising Bureau for the month of December 1963.

Unpaid Dues of $1,247.50, offset by a reserve account in like amount, represent 1963 dues of delinquent members carried at the request of local societies. Other delinquent members were dropped from membership in accordance with the by-laws. Exhibit D presents a summary of unpaid dues and membership by societies, as shown by the records of the Association.

Furniture and Fixtures continue to be stated in the fixed amount of $1,000. Equipment purchases and repairs for the year in the total of $635.20 were charged to expense in lieu of depreciation.

The records were carefully reviewed for liabilities at December 31, 1963 and it is believed that all current liabilities of substantial amount are included in the Balance Sheet. The by-laws require the Association to furnish financial assistance, not to exceed $300, on each mal-practice suit. The Association reports no knowledge of any pending suits against members.

Exhibitors have made advance payments of $4,811.00 for annual session exhibit space and these payments will be taken into income when earned in 1964.

The excess of assets over liabilities in the amount of $123,212.64 is shown in the Balance Sheet as a "Reserve for Future Activities."

General

During the year, payments were made to or for the following sponsored organizations:

Missouri State Medical Association Pension Trust	
Employees' Retirement Insurance Premiums	$4,055.65
Employees' Pension Plan Contribution	3,944.35
Total	$8,000.00
Missouri State Medical Foundation	
Stationery, printing, insurance and audit	$ 695.25

The Missouri State Medical Association collected as a part of its annual dues $7.50 per active member and $3.75 per junior member for the Missouri State Medical Foundation. The total collected for the Foundation during the year 1963 was $24,333.41.

Insurance policies were inspected and the following general insurance was in force at the close of the year:

Insurance on	*Type of Coverage*	*Amount*
Furniture and Fixtures	Fire and Extended Coverage (80% co-ins.)	$6,500
Employees	Workmen's Compensation	Statutory
Lessee's Liability	Bodily Injury	$25,000/50,000
President and Treasurer	Fidelity Bond	$20,000
All Other Employees	Fidelity Bond	$5,000
Automobiles of Executive Secretary Field Secretary Executive's Assistant	Non-ownership—Bodily Injury	$50,000/100,000
	Non-ownership—Property Damage	$5,000

Subject to the comments thereon, the attached statements, in our opinion, present fairly the financial position of the Missouri State Medical Association at December 31, 1963 and the financial results of its activities for the year then ended, in accordance with accepted principles of accounting applied on a basis consistent with that of the preceding year.

Yours very truly,
Lennertson & Company
Certified Public Accountants.

Exhibit A

Missouri State Medical Association
Balance Sheet, December 31, 1963

Assets		
Cash		
Mercantile Trust Company (Treasurer's Account)	$ 10,906.98	
Mercantile-Commerce National Bank (Secretary's Account)	118.22	
Petty Cash Fund	22.47	$ 11,047.67
Investments at Cost (Exhibit C-1)		
U. S. Government Bonds	$ 80,319.48	
Corporate Bonds	5,000.00	
Common Stocks	27,015.82	
Total (Market Value $112,832.50)		112,335.30
Accounts Receivable		
Advertising	$ 3,943.53	
Mercantile Trust Company—Investment Custodian	1,139.49	5,083.02
Dues Receivable—Exhibit D		1,247.50
Furniture and Fixtures (at stated values)		1,000.00
Advances for Travel Expenses		303.30
		$131,016.79
Liabilities		
Accounts Payable		
Supplies and Expenses	$ 616.36	
Payroll Taxes	711.81	
Medical Associations	417.48	$ 1,745.65
Deferred Credit to Income		
Advance Payments by Exhibitors		4,811.00
Contingent Liability to Members on Malpractice Suits—none reported		
Reserve for Uncollected Dues		1,247.50
Reserve for Future Activities		
Balance January 1, 1963	$114,842.23	
Excess of Income Over Expenses for the year 1963—(Exhibit B)	8,370.41	123,212.64
		$131,016.79

EXHIBIT B

Missouri State Medical Association
Income Statement for the Year 1963

Particulars	*General Activities*	*Journal Publication*	*Total*
Income			
Dues Received (includes $1.50 per member annually for THE JOURNAL)	$132,932.59	$ 5,244.00	$138,176.59
Rentals—Annual Session Exhibit Space	9,050.00		9,050.00
Subscriptions to THE JOURNAL—Nonmembers		248.15	248.15
Advertising Space—THE JOURNAL		38,368.23	38,368.23
Investments—Interest and Dividends	3,997.18		3,997.18
Collection Fees on AMA Dues	1,430.07		1,430.07
Rental Income—Office Space	540.00		540.00
Total Income	$147,949.84	$43,860.38	$191,810.22
Expenses			
Salary—Executive Secretary	$ 10,800.00	$ 5,400.00	$ 16,200.00
Office Salaries	31,367.26	15,683.62	47,050.88
THE JOURNAL—Paper, Printing, etc.		29,727.73	29,727.73
Cash Discount to Advertisers		380.70	380.70
Commission on JOURNAL Advertising		4,708.27	4,708.27
Postage	2,916.48	824.26	3,740.74
Committee and Meeting Expenses (Exhibit C)	47,102.28		47,102.28
Custodian Fees—Investments	242.69		242.69
Directories and Clipping Service	542.14		542.14
Dues and Subscriptions	653.10		653.10
Employees' Pension Plan Contributions	8,000.00		8,000.00
Equipment Purchases and Repairs in lieu of Depreciation	635.20		635.20
General Expense	206.60		206.60
Insurance—Blue Cross	464.76		464.76
Insurance—General	344.29		344.29
Missouri State Medical Foundation	695.25		695.25
Office Rent and Light	4,577.15		4,577.15
Professional Fees	3,452.64		3,452.64
Stationery, Printing and Office Supplies	5,987.10		5,987.10
Student Awards	225.00		225.00
Taxes—Payroll and Personal Property	1,596.44		1,596.44
Telephone and Telegraph	2,262.49		2,262.49
Traveling Expense—Executive Secretary	1,686.92		1,686.92
Traveling Expense—Field Secretary	2,504,79		2,504.79
Traveling Expense—Executive Assistant	452.65		452.65
Total Expenses	$126,715.23	$56,724.58	$183,439.81
Excess of Income or (Expenses)	$ 21,234.61	($12,864.20)	$ 8,370.41

EXHIBIT C-1

Missouri State Medical Association
Statement of Investments, December 31, 1963

Description	*Bonds at Par Value*	*Cost*
U. S. Treasury 2½% Bond 6/15/67-62	$10,000.00	$ 10,000.00
U. S. Treasury 2½% Bond 12/15/68-63	10,000.00	10,000.00
U. S. Treasury 2½% Bond 6/15/69-64	10,000.00	9,960.91
U. S. Treasury 2½% Bond 3/15/70-65	10,000.00	9,901.72
U. S. Treasury 2½% Bond 3/15/71-66	5,500.00	5,445.86
U. S. Treasury 3⅞% Bond 5/15/68	10,000.00	9,984.44
U. S. Treasury 4 %Bond 10/1/69	25,000.00	25,026.55
Pacific Gas and Electric 4½% Bonds 6/1/90	5,000.00	5,000.00
Central and Southwest Corporation 200 shares		6,345.62
Johns Manville Corporation 100 shares		5,582.34
Morgan Guarantee Trust Co. of N. Y. 55 shares		5,106.55
Standard Oil Co. of California 100 shares		5,045.94
Union Carbide Corp. 37 shares		4,935.37
Total		$112,335.30

EXHIBIT C-2

Statement of Committee and Meeting Expenses
For the Year 1963

Annual Session		$14,663.95
Council Meetings and Councilors' Expenses		6,966.46
Delegates to AMA		4,360.85
Public Service		16,980.01
Women's Auxiliary		1,972.41
Committees:		
Aging	$475.21	
Cancer	11.64	
Civil Defense	471.09	
Infant Care	108.16	
Maternal Welfare	313.74	
Medical Education	152.63	
Mental Health	36.56	
Publication	263.98	
Redistricting	106.47	
Rural Medical Service	34.89	
Scientific and Post Graduate Work	170.23	
Venereal Disease Control	14.00	
Total		2,158.60
		$47,102.28

EXHIBIT D-1

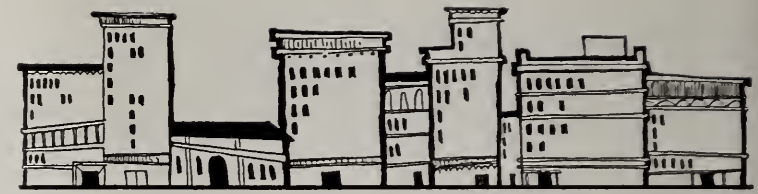
Missouri State Medical Association
Dues Receivable and Membership by Societies
December 31, 1963

MEMBERSHIP

Societies	*Junior*	*Active*	*Honor*	*Total*	*Unpaid Dues*
Andrew		4	1	5	
Audrain		18	2	20	
Barton-Dade	1	7		8	
Benton			1	1	
Boone	15	99	2	116	$50.00
Buchanan	6	69	14	89	50.00
Butler-Wayne-Ripley	2	34		36	
Callaway		16	3	19	50.00
Cape Girardeau	5	43	4	52	
Carter-Shannon		1		1	
Chariton-Macon-Monroe-Randolph		21	4	25	
Clay	10	52	1	63	10.00
Clinton		5		5	
Cole	4	39	5	48	
Cooper		10		10	
Dallas-Hickory-Polk		6	2	8	
Dunklin	2	15	5	22	
Franklin-Gasconade-Warren	2	27		29	50.00
Grand River	4	41	5	50	75.00
Greene	21	133	11	165	
Henry		11	1	12	
Howard	2	5		7	
Jackson	58	621	113	792	
Jasper	2	57	5	64	75.00
Jefferson		16	1	17	
Johnson		12	1	13	
Lafayette-Ray	4	19		23	50.00
Lewis-Clark-Scotland		2		2	
Lincoln-St. Charles	10	19	1	30	
Marion-Ralls-Shelby	4	22	4	30	50.00
Mid-Missouri		29	1	30	50.00
Miller		2		2	
Mineral Area	2	26	4	32	12.50
Moniteau		4		4	
Montgomery		3	1	4	
Morgan		4		4	
Nodaway-Holt-Atchison-Gentry-Worth		14	2	16	
North Central		11	1	12	
Ozarks	2	42	7	51	
Pemiscot	1	16	2	19	100.00
Perry-Ste. Genevieve		10	1	11	
Pettis	1	24	5	30	
Pike	2	5	3	10	
Platte		5		5	
St. Louis City	192	1,016	103	1,311	550.00
St. Louis County	26	385	43	454	
Saline	1	12	3	16	
Semo	1	30	3	34	50.00
South Central	3	15	2	20	25.00
Webster	1	2	1	4	
West Central	4	29	10	43	
Totals	388	3,108	378	3,874	$1,247.50[A]

(A) Delinquent dues of members at December 31, 1963 carried at the request of local societies.

From the Medical Schools



WASHINGTON UNIVERSITY

Salt Transport Research

Biological research in progress at Washington University School of Medicine may provide a clue to one of man's oldest problems—how to utilize sea water for fresh water purposes. Dr. Neal S. Bricker, director of the School's Renal Division, recently became one of the first investigators in the biological sciences to receive a grant from the U. S. Department of the Interior.

Dr. Bricker, who is an associate professor of medicine, is investigating the process of transport of salt and other solutions across living membranes. His experiments are now using a model system with a turtle bladder for the membrane. The Office of Saline Waters, which awarded the grant, may ultimately utilize information derived from the project to its problems of removing salt from sea water for possible use in irrigation.

In the model set-up, the turtle bladder is used to separate two solutions, one of which contains a radioisotope, usually of sodium, a common salt. With use of a fine measuring device, an auto-gamma spectrometer, the amount of the isotope which passes through the membrane may be measured. The goal of this project is to identify the manner in which energy is used within the membrane to pump the salt solution through the membrane. The turtle bladder model is used for the experiment because it provides a simplified set-up for a complicated problem.

Dr. Bricker and his associates know that energy is produced in the bladder by conversion of the glycogen within the bladder cells. They have found that the bladder will synthesize energy for as long as 12 hours. They have also found that oxygen does not have to be present for this process to occur. In most membranes that pump salt, oxygen is essential.

If the energy transforming processes can be identified, the information can be utilized to extend knowledge of kidney function and other organs in both healthy man and in the disease process. "Our interest here lies in learning more about how living systems control their body fluids in relation to their environment," Dr. Bricker said. "The kidney is the major organ of protection within the body. It is also one of the most inaccessible and most complicated.

"A number of scientists are now using simple systems, such as our turtle bladder model, to obtain basic information which may be applied to the kidney. Dr. Bricker said that with the era of success in kidney transplants so near and with the expanding use of the artificial kidney for chronic disease, research on the kidney is of increasing importance.

New Academy Head

Dr. Fred C. Reynolds, professor of orthopedic surgery, has been named president-elect of the American Academy of Orthopaedic Surgeons. He will take office in January 1965 at the annual meeting scheduled for New York City. The Academy, which works for advancement in all phases of orthopedic surgery, is composed of physicians who have practiced the specialty for at least three years and who have been certified by the American Board of Orthopaedic Surgery. Dr. Reynolds has served for the last two years as president of the American Board of Orthopaedic Surgery.

Grant Visiting Professor

Dr. Wesley Spink, professor of medicine at the University of Minnesota, served as the first Samuel Grant Visiting Professor of Medicine at Washington University School of Medicine in January. Dr. Spink is an authority on infectious diseases, especially brucellosis and shock reactions produced by bacterial infection. He is president of the American College of Physicians and presented the Lister Lecture in London in late January.

The professorship honors the well known St. Louis physician and alumnus of the Medical School. Dr. Grant has been a member of the School of Medicine faculty for many years and has served as president of the Medical Alumni Association. He also served as chairman of the campaign which raised funds for the Spencer T. Olin residence hall for medical students and has been a member of the University's board of directors as alumni representative for the Medical School.

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Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

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Last year the student health service on the main campus of Washington University was named for him. The fund for the visiting professorship was initiated by a gift of the late Mr. Jack Pollak of St. Louis and contributed to by other former patients.

Recent Programs

Future directions of science were discussed by a panel of four Washington University professors at the meeting of History of Science and Medicine Society in February. Participating in the discussion were George Pake, provost and professor of physics; Barry Commoner, professor of plant physiology, and Richard Rudner, professor of philosophy. Dr. Carl Moyer, Bixby professor and head of the department of surgery, moderated the panel.

A colloquium on biochemical differentiation and regulation was held at the last meeting of the Washington University Medical Society. Dr. Florence Moog, professor of zoology, discussed control of enzyme activity in developing systems. Dr. Helen Burch, associate professor of pharmacology, discussed biochemical changes in perinatal rat liver, and Dr. David E. Kennell, assistant professor of microbiology, spoke on the regulation of RNA synthesis in bacteria. The convener of the program was Dr. David H. Brown, professor of biological chemistry.

Upcoming Lectures

Dr. Harry Eagle, chairman of the department of cell biology at Albert Einstein College of Medicine of Yeshiva University, will present the twelfth annual Robert J. Terry Lecture on March 2 in Clopton Amphitheatre. He will speak on metabolic controls in cultured human cells.

Studies on virus-cancer relationships will be discussed by Dr. Albert B. Sabin for the twelfth annual Seelig Lecture on March 30. Dr. Sabin is distinguished service professor at the University of Cincinnati.

The Washington University History of Medicine and Science Society will meet on March 31 to hear discussions on medicine in other countries. Dr. John Smith, associate professor of medicine, will speak on his recent year in Colombia. Dr. Malcolm Peterson, assistant professor of medicine, will discuss Washington University's participation in the CARE program in Algiers.

Alumni Reception

The Washington University Medical Alumni

Recent reports suggest...insulin and sulfonylureas may accelerate lipogenesis,[1-5]...serum "insulin" levels are often elevated in obese diabetics[2,3,6]...DBI (phenformin HCl) reduces high blood sugars, lowers elevated "insulin" levels, tends to reduce body weight toward normal.[1,3,7-9]

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DBI-TD timed-disintegration capsules 50 mg.

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In the obese diabetic (ketoacidosis-resistant), DBI (phenformin HCl) with a proper diet: **A.** acts to reduce high blood sugar without increasing fat synthesis or weight gain. **B.** does not increase already elevated endogenous insulin levels; may, indeed, act to restore more normal levels. **C.** favors reduction of weight.

In the ketoacidosis-resistant obese diabetic not amenable to diet alone, hypoglycemic DBI (phenformin HCl) appears to help avoid weight gain or reduce adiposity, factors which otherwise tend to make blood sugar control more difficult and to increase the likelihood of complications. However, in the ketoacidosis-prone diabetic, insulin is still the essential hypoglycemic agent.

Summary: Indicated in stable adult diabetes, sulfonylurea failures and unstable diabetes. Gastrointestinal side effects occurring more often at higher dosage levels abate promptly upon dosage reduction or temporary withdrawal. Occasionally an insulin-dependent patient will show "starvation" ketosis (acetonuria without hyperglycemia) which must be differentiated from "insulin-lack" ketosis, and treated accordingly. Use with caution in severe liver disease. Not recommended without insulin in acute complications (acidosis, coma, infections, gangrene, surgery). Consult product brochure for full information.

Bibliography: 1. Williams, R. H.: Textbook of Endocrinology, Ed. 3, Saunders, Philadelphia, 1962, p. 610. 2. Gordon, E. S.: Metabolism 11:819, 1962. 3. Grodsky, G. M. et al.: Metabolism 12:278, 1963. 4. Sadow, H. S.: Metabolism 12:333, 1963. 5. West, K. M. and Tophoj, E.: Metabolism 10:689, 1961. 6. Yalow, R. S. and Berson, S. A.: Diabetes 9:254, 1960. 7. Weller, C. et al.: Scientific Exhibit, A.M.A., June 1962. 8. Weller, C. et al.: Metabolism 11:1134, 1962. 9. Radding, R. S. et al.: Metabolism 11:404, 1962.

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Association will sponsor a reception for alumni and friends during the annual meeting of the Missouri Medical Association in St. Louis. The reception, which will be held from 6:00 to 7:30 p.m., Tuesday, March 10, in the Coach Room of the Chase-Park Plaza Hotel, will honor Dr. Leonard T. Furlow, associate professor of clinical neurological surgery at the Medical School. Dr. Furlow will be installed as president of the State Medical Association at the banquet following the reception.

UNIVERSITY OF MISSOURI

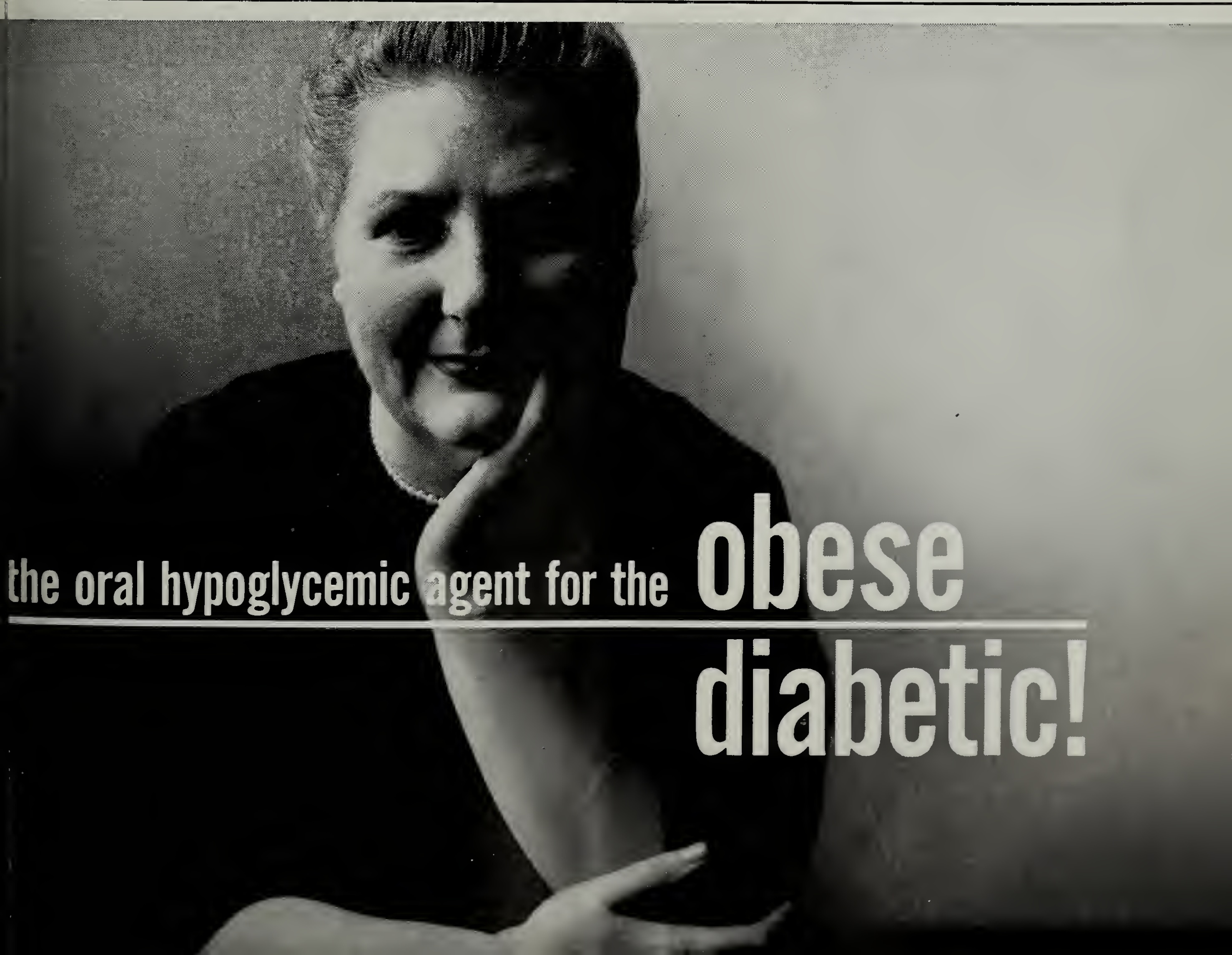
Missouri Professors Publish Books

A comprehensive review of the entire field of germfree research, a new tool in the biological sciences, is presented in a new book by Dr. Thomas D. Luckey, professor and chairman of the Department of Biochemistry at the University of Missouri Medical Center. Dr. Luckey has been working with germfree animals for more than 20 years, and has received international recognition in that field.

Dr. Frank B. Engley Jr., professor and chairman of the Department of Microbiology at the University of Missouri Medical Center, is the author of a concise, comprehensive 338 page "Pocket Reference Guide to Medical Microbiology" which has been recently published. The manual is based on reference material collected by Dr. Engley over a period of 14 years for use by his students and others in the field of microbiology.

Appointments

Marion Spencer DeWeese, M.D., Ann Arbor, Mich., has been appointed professor of surgery and chairman of the Department of Surgery at the University of Missouri Medical Center. Dr. DeWeese fills the vacancy created January 1 by Dr. John J. Modlin, who will resume private practice. Dr. Modlin remains on the Medical Center staff as a clinical consultant. Until June 1, when Dr. DeWeese's appointment becomes effective, John Franklin Patton, M.D., associate professor of surgery (urology) will be acting chairman of the department. Dr. Patton has recently retired as Colonel in the United States Army Medical Corps, Chief of the Department of Surgery at Walter Reed General Hospital in Washington, D. C., and consultant in urology to the Surgeon General of the Army. Dr. DeWeese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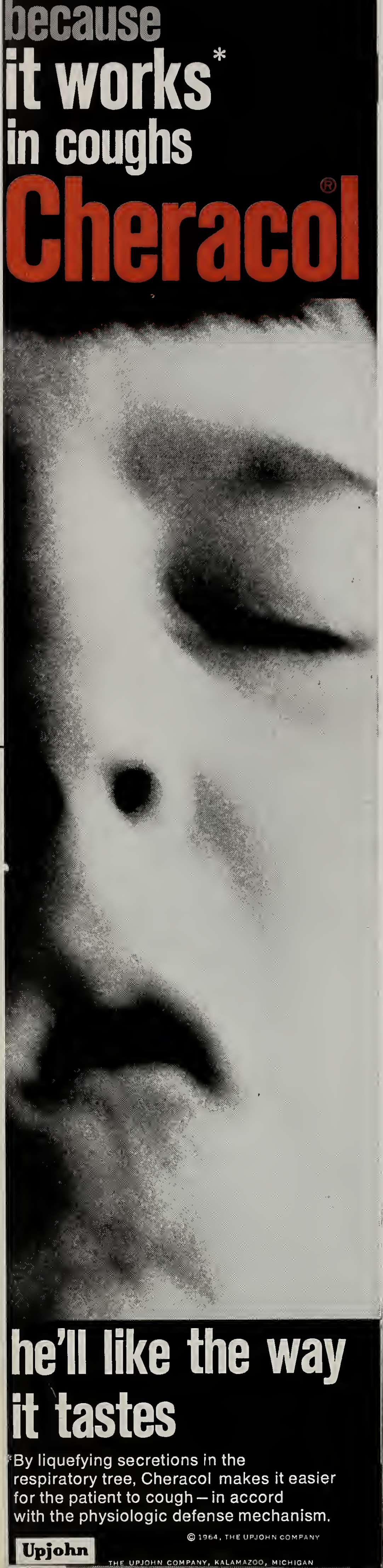

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is at present associate professor of surgery at the University of Michigan.

Dr. Frank B. Engley Jr., professor and chairman of the Department of Microbiology, has been appointed to the editorial board of the *Journal of Bacteriology,* the official journal of American Society for Microbiology.

Trips and Talks

J. M. Martt, M.D., associate professor of the Department of Internal Medicine, and director of the Heart Station at the University of Missouri Medical Center, discussed the technics of cardiac monitoring at a meeting of the Fort Leonard Wood Clinical Society on February 25 in Fort Leonard Wood, Missouri. The discussion was illustrated by slides and actual equipment.

Dr. David G. Hall, associate professor and chairman of the Department of Obstetrics and Gynecology, attended a meeting of the Kansas City Gynecological Society and Maternal Mortality Committee in Kansas City, January 16.

Phillip J. Marco, M.D., assistant professor of psychiatry, and Joan L. Webb, M.D., special resident fellow in psychiatry, attended a meeting of the Eastern Missouri Psychiatric Association in St. Louis on December 5. A talk was given on "The Anatomy and Physiology of Sexual Behavior" by Dr. William Masters, Department of Obstetrics and Gynecology at Washington University.

Dr. Phillip J. Marco, assistant professor of psychiatry, went to Kansas University Medical Center in Kansas City, Kansas, December 3, to make an inquiry into the psychosomatic clinical and research unit at Kansas University for the purpose of evaluating their program for educational use in developing an elective psychiatric program at the University of Missouri. Dr. Marco also went to the Missouri Psychiatric Research Institute in St. Louis, November 21, to inquire into research projects concerned with neurohormones—especially serotonin—which at the time were of concern to the medical student and staff member because of the study of malignant carcinoid problems.

Jacob O. Sines, Ph.D., associate professor of clinical psychology, attended a meeting of the American Psychiatric Association in Iowa City, Iowa, November 15 and 16. Panel discussions and research reports related to the development of a more adequate diagnostic system for use with children. About 100 psychiatrists, psychologists and social workers attended the meeting.

Rodman P. Kabrick, Ph.D., associate professor of clinical psychology, represented the Missouri Association as a voting delegate to the National Association for Mental Health annual meeting in Washington, D. C., November 18 through 23. About 2,000 professional and nonprofessional mental health workers attended the meeting.

SAINT LOUIS UNIVERSITY

Advisory Council

Establishment of an advisory council for the Medical Center of St. Louis University has been announced by the Very Rev. Paul C. Reinert, S.J., University president. John P. Butler, president of Anderson Motor Service, Inc., was appointed chairman.

Other appointees are: Ben F. Jackson, senior partner, Price Waterhouse and Co.; H. M. Stolar, attorney, Stolar, Kuhlmann, Heitzmann, and Eder, and John M. Wolff Jr., vice president, Western Printing and Lithographing Co. Dr. George E. Thoma, associate professor of internal medicine at the University's School of Medicine, will serve as secretary.

In commenting on the establishment of the council, the Rev. Edward J. Drummond, S.J., vice president for the Medical Center, said he welcomed the outstanding experience and leadership in professional life and civic affairs the new appointees would bring to the Medical Center.

"The Medical Center Council was established to provide the vice president for the Medical Center; the University's board of trustees; the officers and faculties of the Schools of Medicine, Dentistry, Nursing and Health Services; and the Saint Louis University Hospitals with continuing counsel and advice on the Medical Center's functions in which the experience of lay civic leaders would be most helpful," Father Drummond said.

"The Council will provide the administration of the Medical Center with experienced advice in all matters of business and fiscal affairs and will assist in the development of long-range plans for the physical growth of the Medical Center."

The Council will be composed of twelve members who will meet at least four times a year. Six additional members will be invited to join. Members are appointed for a three year period.

University Hospitals Report

The St. Louis University Hospitals 1963 annual report released by Mr. John B. Warner Jr., director, revealed that $11,000,000 of free patient care was donated to the community through the Clinical Teaching Services of Firmin Desloge during the last two decades.

This represents one third of the University Hospitals gross patient charges which totaled $32,000,000 from 1943 to 1963.

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mary, the hospital operating expenses mounted from $324,098.95 in 1943 to $3,289,884.56 in 1963, representing a tenfold rise over a period of 20 years.

Average hospital charge per patient day rose from $4.81 to $39.96. While the average patient charge in 1963 was eight times more, the report indicated the hospital expenditures have increased 10 times that much.

Patients are not remaining hospitalized as long as they used to. Average adult patient stay in 1943 was 13.2 days as compared with 9.2 days in 1963.

In his letter prefacing the report, Mr. Warner said important events of the fiscal year included the opening of the David P. Wohl Memorial Mental Health Institute, the organization of the Saint Louis University Hospitals staff, the adoption of a new name for the Desloge Hospital Guild, now known as Saint Louis University Hospitals Auxiliary and the large scale remodeling at Firmin Desloge.

Major renovation projects completed included a $100.00 tuckpointing operation at Desloge Hospital, remodeling of patient rooms throughout the hospital, the innovation of an Immediate Care Unit on the fourth floor, expansion of the Pink Door Gift Shop and construction of an Optical Shop at Desloge Hospital for University personnel.

Father Reinert Honored

The Very Rev. Paul C. Reinert, S.J., president, St. Louis University, was honored at a testimonial luncheon sponsored by four University women's organizations upon his selection as the *Globe-Democrat* Man of the Year for 1963.

The luncheon held in the Chase Club of the Chase Park Plaza Hotel was climaxed by announcement of the commissioning of St. Louis artist Fred Conway to paint a portrait of Father Reinert.

Mrs. F. Joseph Pfeffer, president, St. Louis University Hospitals Auxiliary, who presided at the luncheon, announced that the portrait was a gift to Father Reinert from his many friends.

Officers of the other cosponsoring organizations who were seated at the head table were: Mrs. James V. Jones, president, the Faculty Women's Club; Mrs. Richard I. C. Muckerman, chairman, the Women's Council, and Mrs. D. Elliott O'Reilly, president, the Women's Club of St. Louis University School of Medicine.

Special guests at the head table were: Mrs. Raymond R. Tucker, Mrs. Donald Gunn Sr., Mrs. Lawrence K. Roos and Mrs. Gerald A. Rimmel.

In outlining the plans for the University's continued development, particularly in the next five years leading up to the University's 150th Anniversary in 1968, Father Reinert emphasized the essential role the University's women's organizations will play in this development.

More than 300 women were present at the luncheon. Father Reinert was the only man present at the affair.

Medical Alumni Program

An alumni reception sponsored by the Medical Alumni Association will be held in the Stockholm Room of the Park Plaza Hotel from 5:45 p.m. to 7:15 p.m. on March 10. The reunion will be held in conjunction with the Missouri State Medical Association's annual meeting, and is scheduled to precede the Past President's dinner.

A postgraduate program entitled "The Physiological Basis for Diagnosis and Treatment of Disease" sponsored by the University's Department of Internal Medicine and the Missouri State Medical Association will be held in Miller Hall, Firmin Desloge Hospital on Wednesday March 11. Sessions will begin at 10 a.m. with Dr. G. O. Broun Sr., dean, School of Medicine, presiding.

Participants in the program, their subjects and time of presentation will be: Dr. Thomas F. Frawley, director, Department of Internal Medicine, "New Concepts of Parathyroid Function in Clinical Disease," 10:00 a.m.; Dr. Henry E. Oppenheimer, associate professor of clinical medicine, "The Basis of Therapy of Diabetes Mellitus," 10:30 a.m.; Dr. Neil I. Gallagher, assistant professor of medicine, "Recent Trends in the Study of Iron Metabolism," 11:00 a.m.; Dr. Goronwy O. Broun Jr., assistant professor of internal medicine, "Newer Concepts of the Disorders of Iron Metabolism," 11:30 a.m.

Afternoon sessions will begin at 1:30 p.m. with Dr. Ralph A. Kinsella Sr., Professor Emeritus, department of internal medicine, presiding. Participants in the program, their subjects and time of presentation will be: Dr. Herbert C. Sweet, professor of clinical medicine, "Pathophysiology and Therapy in Chronic Pulmonary Insufficiency," 1:30 p.m.; Dr. James G. Janney Jr., associate professor of clinical medicine, "Evaluation of the Hypertensive Patient," 2:00 p.m.; Dr. R. William Burmeister, instructor in internal medicine, "Antibiotics and Host Response in the Management of Infectious Disease," 2:30 p.m.; Dr. Guy E. Van Goidsenhoven, assistant professor of medicine, "Malabsorption Syndrome," 3:00 p.m.

Registration fee of $10.00 includes luncheon in Firmin Desloge Hospital Cafeteria at 12:30 p.m.

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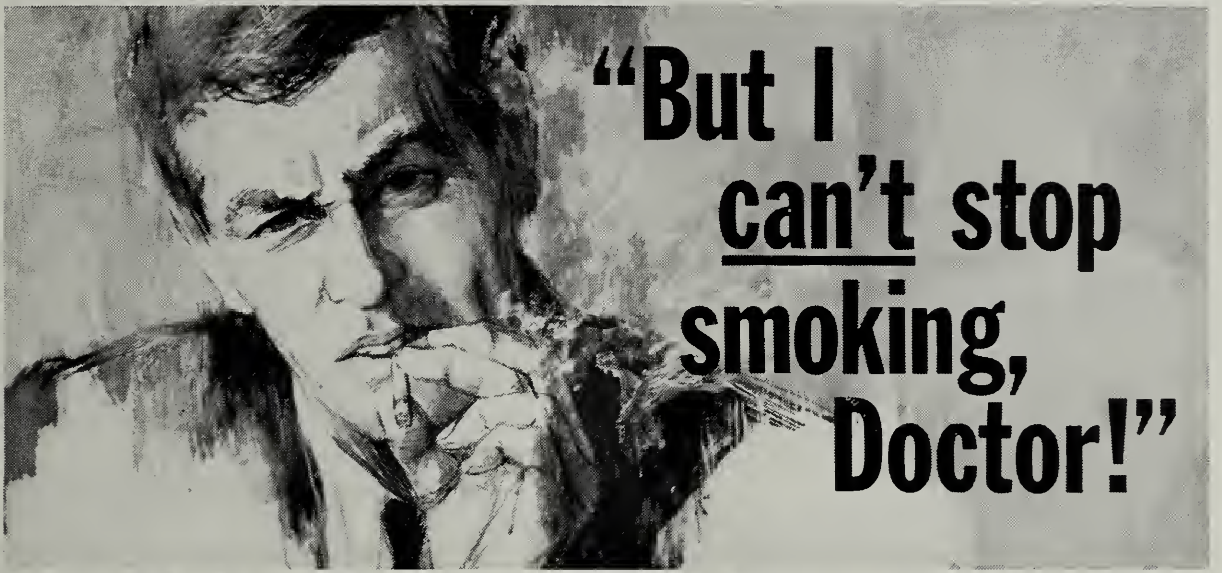
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References: 1. Goodman, L. S. and Gilman, A.: The Pharmacological Basis of Therapeutics, New York, Macmillan, 1960, Ed. 2, pp. 620-622; 2. Edmunds, C. W.: J. Pharmacol. and Exper. Therap., 1:27, 1909; 3. Hazard, R. and Savini, E. Gand., 92:471, 1963. 4. Dorsey, J. L.: Ann. Int. Med., 10:628, 1936; 5. Rasmussen, K. B.: Ugeskr.laeger, 118:222, 1956; 6. Ejrup, B.: Sven. lak. Tid., 53:2634, 1956; 7. Jochum, K. and Jost, F.: Munch. med. Wchnschr., 103:618, 1961; 8. Jost, F. and Jochum, K.: Med. Klin., 54:1049, 1959; 9. Smoking and Health, Summary and Report of the Royal College of Physicians of London on Smoking. New York, Pitman, 1962.

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LEO H. POLLOCK, M.D.

Missouri Medicine in Review

FORTY YEARS AGO

The sixty-seventh annual session of the Association, which meets at Springfield, May 6, 7 and 8, will witness a departure from the custom that has been followed for so many years, and instead of limiting the speakers to members of the Association, two eminent members of the profession from other parts of the country will speak. The program committee with the approval of the Executive Committee has invited John A. Ferrell, D.P.H., New York City, director for the United States of the International Health Board of Rockefeller Foundation, and Dr. William Allen Pusey, Chicago, president-elect of the American Medical Association. These guests will deliver addresses at the meeting on Wednesday, May 7.

A notable advance toward the extension of the teaching facilities in medicine at St. Louis was consummated in February when the St. Louis University was given control of the St. Mary's Hospital group, comprising the new St. Mary's Hospital now approaching completion, the St. Mary's Infirmary and Mount St. Rose Sanitarium. These three hospitals will become a university hospital assuming the character of a department of the university. By the terms of the agreement, the staffs for the three hospitals will be appointed from members of the faculty of the Medical School of St. Louis University, thus giving the control of the medical service to the staff. Hitherto, the appointment of the hospital staffs of the three institutions was under the control of the Sisters of St. Mary, who own the group, but the Sisters will not relinquish any proprietary title in the hospitals. This arrangement lifts the medical school of the St. Louis University into the class occupied by the Washington University with its Barnes Hospital, the Johns Hopkins University with the Johns Hopkins Hospital, the Columbia University with the Presbyterian Hospital, and Harvard University with the Peter Bent Brigham Hospital.

Health Legislation in the 68th Congress included H. R. 65: To Regulate Interstate Traffic in Sutures and Surgical Ligature Material. The shipment between the states of any suture or ligature material for human surgical use must bear a label showing that such material has been sterilized, under the provisions of this measure; it provides that any officer of the Treasury Department detailed for that purpose, may enter and inspect any establishment where sutures or ligature material for human surgical use is prepared or packed; it establishes a Board consisting of the surgeons general of the Navy, Army and Public Health Service to establish regulations on this general subject.

TWENTY-FIVE YEARS AGO

Three hundred million dollars is alleged to be spent in this country annually for drugs which will produce an evacuation of the bowels. Such preparations are in great demand by persons who will not realize that there is no alarm clock in the intestinal tract. Furthermore, these persons, impelled by clever advertisers, remain convinced that a daily movement is necessary to health.

TEN YEARS AGO

Six father-and-son pairs of physicians, all now of St. John's Hospital (St. Louis) staff, attended the Hospital's sixteenth annual Christmas dinner for its doctors on Thursday evening, December 10. The twelve two-generation medical men are: Dr. Joseph P. Costello, Dr. Joseph C. Peden, Dr. Charles H. Neilson, Dr. Augustus P. Munsch, Dr. Linus M. Ryan, and Dr. Otto V. Lieb, and their sons: Dr. Joseph P. Costello Jr.; Dr. Joseph C. Peden Jr.; Dr. Arthur W. Neilson, Dr. Girard A. Munsch, Dr. Robert E. Ryan, and Dr. Francis A. Lieb. This preholiday affair is given each year as a gesture of appreciation by the Sisters of Mercy who have conducted St. John's Hospital since is establishment in 1871. Dr. Grayson Carroll, Associate Chief of Staff, was the toastmaster.

Kansas City radiologists were much in evidence at the 39th Annual Meeting of the Radiological Society of North America in Chicago late in December. Ira H. Lockwood, M.D., pre-

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All material other than scientific should be received prior to the first of the month preceding month of publication.

Please give notice of change of address at least one month in advance of the change, giving old and new addresses.

WASHINGTON

Medical Aid Grab-Bag

On February 17, the *St. Louis Globe-Democrat* summed up an opinion of the situation under President Johnson of the medical care of the elderly as follows:

"In the health program he has submitted to Congress President Johnson has wrapped up in one package anything left over from the New Deal, the Fair Deal and the New Frontier—and stamped his LBJ brand on it.

"As with the war against poverty and the crusade to protect the consumer he has tossed into the hopper for this election year, Mr. Johnson doesn't offer anything particularly new in his health program. His 'idea man' only went to work last week.

"But by now there can be no doubt that anything branded LBJ is sure to be comprehensive!

* * *

"Was the Kennedy program to provide Medicare for persons over 65 through Social Security inadequate, because it made no provision for those not covered by Social Security?

"The LBJ program easily takes care of that. Persons who don't pay Social Security taxes, and won't pay more if medical insurance is included, will get the same benefits for free—the money to come from the 'administrative budget' to which all taxpayers contribute.

"Was the Kennedy Administration, seeking Medicare, cool to the Kerr-Mills program under which the states, aided with Federal funds, can provide for the medically indigent?

"No one can raise that objection to the LBJ program. The President urges more states to avail themselves of the Kerr-Mills law as a 'supplement' to the Federal hospital insurance he proposes for those both under and outside Social Security.

* * *

"Was the original Medicare proposal a threat to private health insurance plans through which Americans could make provision themselves for their old age?

"That's taken care of, too, under the LBJ program. The President says it will provide 'a base that related private programs can supplement.' Thus persons who have any money left after their taxes have paid for both Medicare and Kerr-Mills can get three-way medical protection for their own old age.

"Not, of course, that the frugal Mr. Johnson stresses the money involved as he offers the American people his panaceas for all their ills and needs the New Deal, Fair Deal and New Frontier didn't take care of.

* * *

"Medicare as proposed by the late President Kennedy, which didn't make provision for one-third of the American people not under Social Security, was estimated to cost $5,000,000,000 during the first five years.

"To the LBJ program would have to be added at least one-third more to provide for those to be given free the benefits others were paying higher Social Security taxes for.

"Nor is that all.

"In his 'vigorous and many-sided attack on our most serious health problems,' Mr. Johnson has included a lot of incidentals which must have been overlooked before by accident.

"Among the many sides would be Federal spending for schools of nursing, for group-practice medical and dental facilities, for renovating older hospitals in the larger cities, for vocational rehabilitation programs, for preventing and controlling air pollution, for pesticides control, narcotics control, etc., etc., etc.!"

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Across
Missouri

MISSOURI HIGH IN HEALTH INSURANCE PROTECTION

Missourians have reached a high level in health insurance protection, according to a recent report by the Health Insurance Institute. The latest inclusive figures by the Institute are for the year 1962.

As of Dec. 31, 1962, 85 per cent of the state's population were covered by some form of health insurance for the costs of hospital and medical care. This compares with the national figure of 76 per cent of the civilian population—some 141 million persons—having health insurance.

Some figures as of the 1962 date included the number of persons with hospital expense insurance, 3,710,000; number of persons with surgical expense insurance, 3,378,000; number of persons with regular medical expense insurance, 2,523,000; number of persons with major medical insurance, 840,000; total health insurance benefits paid in 1961, $146,650,000.00.

The amount paid by insurance companies for hospital, surgical and medical care, including loss of income was $81,999,000.00. That paid by Blue Cross-Blue Shield and other plans for hospital, medical and surgical care was $64,651,000.00.

The number of health insuring organizations licensed in the state was 276. This total was made up of 251 insurance companies, four Blue Cross-Blue Shield and similar groups and 21 other health plans.

HOSPITAL STATISTICS

The number of non-federal, short term general and other hospitals in the state at the end of 1962 numbered 110; the number of hospital beds available was 17,294. The number of persons admitted to hospitals during the year 1962 was 573,709. The number of persons under hospital confinement on an average day was 13,179. The average length of time a patient remained in the hospital was eight days. The average cost per hospital stay was $275.98.

PROFESSIONAL SERVICES

The number of practicing physicians in Missouri at the end of 1962 is given as 3,441; the number of practicing dentists was 2,426, and the number of registered pharmacists was 2,790.

PRESENT DAY ESTIMATES

A recent estimate by the Health Insurance Institutes gives 145 million as the number of persons covered today by insurance.

Among newer type insurance coverage is nursing home care and more than 30 companies specifically offer this type of care.

Approximately 1.2 million people were covered by insurance for dental care in 1962, more than double the number in 1960. The number of plans offering coverage for dental care is estimated to be more than 300.

Long-term disability available on an individual basis is expected to grow at an accelerated rate in 1964 under group insuring mechanism. This provides benefits to help replace income lost by the wage-earner as a result of disability for a minimum of five years.

Insurance for the elderly is one of the fastest growing types of insurance. More than 200 companies as well as many Blue Cross and Blue Shield plans offer health insurance plans for the aged. Ninety-five companies and associations provide guaranteed for life policies under 191 policies and plans. About 10.3 million aged persons had health insurance at the end of 1962—60 per cent of the 65 and over segment of the non-institutionalized aged population.

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C. G. STAUFFACHER, M.D., Secretary

Missouri Academy of General Practice

The 16th Annual Scientific Assembly of the AAGP will be held in Atlantic City April 13-16, 1964. The meeting will be housed at Atlantic City's Convention Hall and will feature 31 speakers and more than 110 scientific exhibits.

The theme of the 1964 assembly will be, "The Family in Medical Perspective." Says the AAGP, "The family theme stems from growing recognition that if the family doctor is to provide comprehensive health care for the whole family, he must be alert and trained to view his patients in the light of their environment.

"This means that his care must transcend the basic medical sciences and mere diagnosis and therapy, and involve application of the behavioral sciences—anthropology, psychology and sociology. The patient is a family member and the changes in behavioral patterns within the close-knit family situation can have tremendous impact on health."

With the foregoing in mind, a four physician panel, two of whose members are working family doctors, will discuss four specific questions on the opening session on Monday afternoon, April 13. These questions will be: What are the medical needs of the family? What effects do behavioral changes in family life, mores, economics and religion have on these medical needs? How, and how well, does the family doctor provide family medical care? What special qualifications must the family doctor have to cope with behavioral modifications of family health problems?

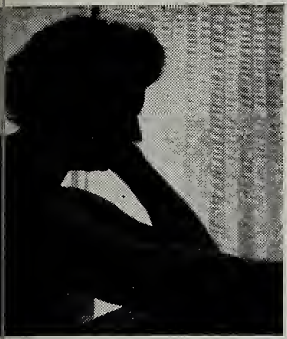
Following consideration of sociological aspects of family practice, the program will cover, through top national authorities, a wide spectrum of physical problems confronting the family doctor. Among these will be a symposium on newest technics in endocrinology, a panel on breast tumors, G.I. tract anomalies in the newborn child and defective hearing. Additional topics include diagnosis in heart disease and in collagen disorders, occupational medicine, episiotomy, soft-tissue radiology, puzzling infant rashes, sinusitis, post-infectious hepatic functions and the mouth as an indicator of general health.

The causes and impact of a rising incidence of venereal disease, especially in youth, will be explored in detail in a panel discussion on the closing program, Thursday morning, April 16.

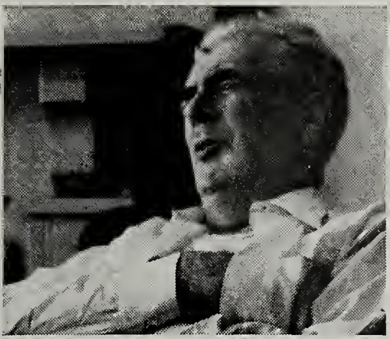
The climaxing social event will be held on Wednesday night, April 15, with the President's Reception and Dance, immediately following the inauguration of incoming President Julius Michaelson of Foley, Ala.

Attendance at the scientific assembly is valued at 14 hours of postgraduate study.

The AAGP policy making Congress of Delegates will convene on Saturday, April 11, at the Shelburne Hotel in Atlantic City. The Missouri Academy delegates, who will take part in the deliberations of the Congress of Delegates, are Charles O. Metz, M.D., St. Louis, and C. G. Stauffacher, M.D., Sedalia. Alternate Delegates from Missouri are Walter T. Gunn, M.D., St. Louis, and Edson C. Carrier, M.D., Kansas City.


The insomniac

The tense, nervous patient

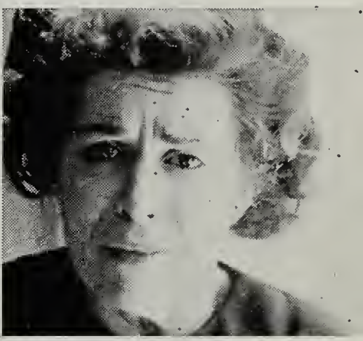

The heart-disease patient

The surgical patient

girl with dermatosis

Tension headache

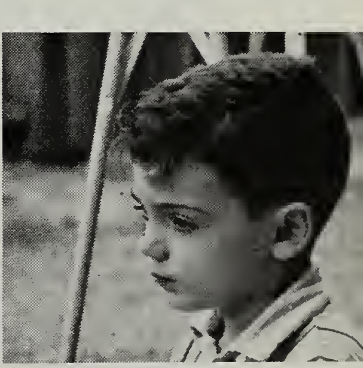
The woman in menopause


Anxious depression

menstrual tension

The agitated senile patient

The alcoholic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Component Societies in Affiliation With the Missouri State Medical Association

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Audrain	5	Harry F. O'Brien	Mexico	Gordon Shaw	Mexico
Barton-Dade	8	Herbert M. Arnold	Lamar	T. W. Carroll	Lamar
Benton	6			James A. Logan	Warsaw
Boone	5	Jack M. Martt	Columbia	C. Thorpe Ray	Columbia
Buchanan	1	Herbert C. Senne	St. Joseph	Irwin I. Rosenthal	St. Joseph
Butler-Wayne-Ripley	10	James H. Turner	Poplar Bluff	Wm. D. Robertson	Poplar Bluff
Callaway	5	William J. Cremer	Fulton	Katherine Brown	Fulton
Cape Girardeau	10	Wm. O. L. Seabaugh	Cape Girardeau	Joseph E. Hecker	Jackson
Carter-Shannon	9	H. D. Rollins	Winona		
Chariton-Macon-Monroe-Randolph	2	Thomas S. Fleming	Moberly	J. Will Fleming	Moberly
Clay	1	Edward H. Fischer	N. Kansas City	John M. Williams	Liberty
Clinton	1	W. B. Spaulding	Plattsburg	J. P. Mabrey	Plattsburg
Cole	5	G. D. Shull	Jefferson City	F. O. Tietjen	Jefferson City
Cooper	5	T. C. Beckett	Boonville	D. Hata	Boonville
Dallas-Hickory-Polk	8	Ben H. Koon	Bolivar	Evelyn Griffin	Buffalo
Dunklin	10	J. Owen Swafford	Senath	E. L. Spence	Kennett
Franklin-Gasconade-Warren	4	B. P. Eisenmann	New Haven	Carvel T. Shaw	Hermann
Grand River Medical Society (Caldwell-Livingston-Carroll-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb)	1	James H. Sweiger	Maysville	Jack L. Vinyard	Carrollton
Greene	8	Kenneth E. Knabb	Springfield	Guy D. Callaway Jr.	Sringfield
Henry	6	J. O. Smith	Clinton	R. S. Hollingsworth	Clinton
Howard	5	William J. Shaw	Fayette	William A. Bloom	Fayette
Jackson	7	Gerald A. Miller	Kansas City	E. H. Stratemeier	Kansas City
Jasper	8	M. Foster Whitten	Carthage	D. O. Allen	Joplin
Jefferson	4	F. L. Kozal	Crystal City	J. L. Mayfield	Crystal City
Johnson	6	A. L. Folkner	Warrensburg	Donald E. Frein	Leeton
Lafayette-Ray	6	Wilbur E. Fulkerson	Higginsville	William LaHue	Lexington
Lewis-Clark-Scotland	2	Earl Gilfillan	Memphis	Landis Y. Davis	Canton
Lincoln-St. Charles	4	Vincent Muenster	St. Charles	Robert J. Fleming	St. Charles
Marion-Ralls-Shelby	2	Wyeth Hamlin	Hannibal	John H. Walterscheid	Hannibal
Mid-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)	9	Rae W. Froelich	Lebanon	M. K. Underwood	Rolla
Miller	5			C. T. Buehler	Eldon
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds)	10	A. G. Karraker	Farmington	C. W. Chastain	Farmington
Moniteau	5	K. S. Latham	California	L. M. Gallagher	California
Montgomery	5	E. J. T. Andersen	Montgomery City	Samuel J. Byland	Wellsville
Morgan	5	Jack Gunn	Versailles	J. Loren Washburn	Versailles
Nodaway-Holt-Atchison-Gentry-Worth	1	John M. Wanamaker	Rock Port	Frank B. Matteson	Grant City
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Paul E. Hilton	Kirksville	Edward M. Grim	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)	8	William J. Glass Jr.	Monett	Paul B. Anderson	Neosho
Pemiscot	10	J. D. Caldwell	Hayti	James Barnard	Caruthersville
Perry-Ste. Genevieve	10	Oscar Carron	Perryville	Joseph Lutkewitte	Ste. Genevieve
Pettis	6	Thomas J. Hopkins	Sedalia	E. M. Braverman	Sedalia
Pike	2	W. Joe Martin	Louisiana	E. K. Jackson	Clarksville
Platte	1	H. Graham Parker	Platte City	H. C. Thurman	Parkville
St. Louis City	3	David N. Kerr	St. Louis	Richard V. Bradley	St. Louis
St. Louis County	4	James R. Nakada	St. Louis	C. Howe Eller	St. Louis
Saline	6	Marvin Rohrs	Marshall	R. C. Haynes	Marshall
Semo County Medical Society (Stoddard-New Madrid-Mississippi-Scott)	10	John Dernoncourt	Charleston	Thelma C. Buckthorpe	Sikeston
South Central Counties Medical Society (Howell-Oregon-Texas-Wright-Douglas-Ozark)	9	Amos L. Coffee	Willow Springs	Rollin H. Smith	West Plains
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour
West Central Missouri Medical Society (Bates-Cass-Cedar-St. Clair-Vernon)	6	Carter W. Luter	Butler	Roy W. Pearse	Nevada

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Woman's Auxiliary

I begin my first communication to you a bit stiff in my writing joints and my cerebral reflexes. As the year progresses I hope these functions will improve. You are aware that these first expressions precede my installation by some two weeks, hence concrete reports on our convention in St. Louis will come later.

Mrs. Delevan Calkins

I have raised a family of four, chased their sports activities, worked at school, church and civic matters, rooted for citizenship—the works! As a native Missourian whose home has always remained in the state we have enjoyed the lakes, the hills and bluffs, the universities, but now I am learning to know my Missouri through its auxiliaries and look to the coming year with pleasure. As a former nursing supervisor I loved the medical field and our devoted and dedicated doctors. Auxiliary work has naturally always been a major interest of mine.

For any of you who may not be aware of the vigor and devotion that Jane Crispell has put into all her work for the Auxiliary let me state the case for you. A dedicated person, she has been wonderfully effective at details with an active correspondence, accurate reporting and note keeping in her struggle to ease my path into office. My shortcomings will be less evident because of her efforts and, Jane, I sincerely appreciate all these things that will be passed along to my successor.

During the year Jane and I attended our State Convention in Kansas City, the St. Louis County Auxiliary for Dotty Deyton's installation and then we were guests at the Illinois State Meeting in Chicago along with presidents and presidents-elect from Michigan, Wisconsin, Indiana and Kentucky. It was nice to arrive at National Convention at Atlantic City in June and see familiar faces from five states. In September I was a guest at the Kentucky State meeting in Lexington. These experiences in hearing the progress and problems of other state auxiliaries and meeting other doctors' wives is of incalculable value. Both the National Conference in Chicago and our own Fall Conference in Joplin during October were constructive.

The National theme of "Serve and Communicate" has been carried out in many ways by all the auxiliaries. A doctor-lawyer dinner in Pettis County, Cape Girardeau made puppets for the pupils of the Handicapped Training Center, Marion-Ralls-Shelby sponsored a Refresher Course for Nurses and helped put over the first Sabin Oral Sunday in the state. Audrain County helped with the crippled children's Easter seal drive, Jasper granted two $500.00 nurses' scholarships, Boone County's biggest project is aiding the Red Cross in its volunteer blood procurement program. Buchanan has four Health Career Clubs going with each club having two Auxiliary members as advisers. The film "Cry for Help" was shown to representatives from the welfare agencies and other organizations interested in mental health by Jackson County. Cole County gave a tea for the wives of lawyers, pharmacists and dentists, Lafayette-Ray promoted teaching classes in Medical Self Help Education, Callaway County carried out a project for the tuberculosis ward at the State Hospital and the chronic ward at the Callaway Hospital. Johnson County helped in the dedication of the new Johnson County Memorial Hospital. St. Louis City and St. Louis County helped with the massive Oral Sabin Immunization and staffed Tuberculosis Mobile X-Ray units. Mineral Area sponsored the showing at two theaters of the films "Self Breast Examination" and "Time and Two Women." Clay County sponsored four Health Career Clubs which are active and will give a $300.00 scholarship. Butler-Ripley-Wayne sponsored the Medical Self Help program for a six weeks course in conjunction with the Civil Defense Department. Grand River appointed a committee to help select a worthy student to benefit from their health career fund. Dunklin gave assistance to the South Missouri Mental Health Center, MAL's working with Rural service organizations, PTA's and Civil defense groups. Saline County raised funds for AMA-

(Continued on page 308)

Volume 61, Number 4—April, 1964

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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VERNON E. WILSON, M.D., *Columbia*

University of Missouri Medical Center

A Progress Report

Changes in personnel and in operational procedures are outlined, showing the progress that is being made and that has been made during the eight years of existence of the four year medical school at Columbia.

Dr. Wilson is Dean and Director of the University of Missouri School of Medicine.

Indebtedness to the Missouri State Medical Association for the opportunity of presenting this fifth annual report of activities of the University of Missouri School of Medicine is acknowledged. The many persons who collectively through state organizations or individually have aided the new and rapidly growing institution in Columbia are so numerous as to defy an individual mentioning of each name. Suffice it so say that whatever success has been achieved has resulted in large measure from the fine and concerted support rendered by the State Medical Association, the Academy of General Practice, the Alumni Association and the several state and private agencies with whom it has been our privilege to cooperate during this period of time.

The single most important element in the success of any institution or organization is the people in it. This is particularly true, I believe, for a school of medicine. Our product is people—highly trained individuals who will help to meet the needs of the communities for health care. Their study is directed to people, people with medical problems. Thus, it seems appropriate in a review of the institution to discuss first the patients who came to the Medical Center during the last year.

Patients

Patients continue to come regularly from almost all of the 114 counties of the state. Last year there were approximately 10,000 admissions to the hospital and 60,000 visits to the Outpatient Clinics. A high percentage of the patients coming to the clinics and to the hospital are first admissions, which has made their care a rich source of instruction for the education of students and resident staff. Physicians of the state have, for the most part, responded magnificently to the need of the school by selective referral of patients who will provide the best possible teaching experience.

Because of the growing demand, it was not possible this year to accept all patients who were referred. Preference in such instances is given to the individual whose medical problem will lend itself to a comparatively brief treatment period and who would seem to particularly need the resources of a large and complicated medical center. A proportion of chronic illness is accepted in order that the cross-section of health care given should be representative of that which is needed in the community. All patients continue to be accepted only upon referral of their family physician. We are aware that communications regarding return visits still need improvement and are working diligently to provide this.

Outpatient Clinics.—Although the rapidly-growing number of individuals coming to the Outpatient Clinic, and the time involved in their care has in part prohibited the staff from setting up a completely smoothly functioning organization in that area, this is the goal in the interest of all concerned. Every attempt is being made to provide each patient with personalized treatment. In addition, the Outpatient Clinic Committee is now working out details of a system which they hope will assure the patient of an individualized series of appointments upon his scheduled arrival in the Clinics, and thus help to reduce the amount of waiting time which is sometimes required now. Considerable emphasis is being placed upon developing a system which will give immediate information back to the referring physician following an outpatient visit, although this is a relatively difficult procedure to initiate and to carry out routinely.

Student Body

For each of the five years of these annual reports, the total number of applications to the School of Medicine has continued to increase. This year, more than 600 applications were submitted. Two hundred and eighty-five applicants were interviewed at the Medical School. All residents of the State of Missouri who made application were invited to come for an interview.

We are particularly indebted to the State Medical Association and to alumni for stimulating the interest of students throughout the state in attending the University of Missouri, and hope that we may continue to have their support.

The Admissions Committee has been impressed both with the high caliber of individuals who indicated an interest in attending the University of Missouri and the general level of their academic performance in premedical work. Because of the increasing academic proficiency of the incoming classes, it is the belief of the faculty that an even higher percentage of these first year students will graduate, which obviously gives an increase in the number of physicians who can enter practice in the state. Eighty-five students are now being admitted into each first year class. It will not be possible to take more students until more class room and laboratory space is made available. In addition, more faculty would need to be hired, and thus more office and research space would be required. Fortunately, the amount of patient care being given in the hospital would support a larger student body; consequently, limitation at the moment rests with class room and faculty space where expansion is urgently needed.

Faculty

The last year has brought a number of changes and some major additions to the School of Medicine faculty.

It was with deep regret that the University announced in July that Dr. John J. Modlin, who had served as Chairman of the Department of Surgery since January of 1961, would be relinquishing his post as of January 1, 1964, to reenter the private practice of surgery in Columbia. Under Dr. Modlin's excellent leadership, the Department of Surgery had filled all of its specialty areas and had made great progress in achieving its role as an academic arm of the University. His many patients and friends are of course delighted to have him return to private practice, and he will be retaining his appointment as a teacher on the faculty and will continue to participate on a volunteer basis in that role.

The school has been fortunate indeed in being able to attract to this post Dr. Marion S. DeWeese from the University of Michigan. Dr. DeWeese has been a member of that faculty since 1948 and has achieved an outstanding national and local reputation as a teacher and clinician. He has an extensive bibliography as a result of his investigative work, and under his leadership the Department of Surgery can be expected to continue to grow and to further enhance its academic program.

During the interim period until Dr. DeWeese's arrival in June, Dr. John F. Patton has assumed the direction of that department as Acting Chairman. Dr. Patton, who retired recently as a Colonel in the United States Army Medical Corps, was formerly Chief of Surgery at Walter Reed Hospital in Washington, D. C. He is a native born Missourian, who has returned to this state for his retirement. Following Dr. DeWeese's arrival, Dr. Patton will continue on the faculty in the Section of Urology, where he will serve on a part time basis.

William D. Bryant, Ph.D., who has been Director of the Community Studies group in Kansas City, has accepted a post as of January 1 as Assistant Dean and Coordinator for Medical Research in the Medical Center. He is well known to individuals in the Kansas City area, and the School looks forward with pleasure to his many contributions in the field of research development.

Dr. William D. Mayer, who has been serving half time in the Dean's Office and half time in the Department of Pathology, will be coming to the Dean's Office on a full time basis as of July 1. At that time, he will assume the academic responsibilities which are being relinquished by Dr. G. S. Lodwick. A new Assistant Dean for Student Affairs is being sought to fill Dr. Mayer's present position.

Dr. G. S. Lodwick, Chairman of the Department of Radiology and Associate Dean in the School of Medicine, has returned to full time activities in the Department of Radiology, effective January 1. Dr. Lodwick served as Acting Dean in the interim period in 1959 and continued in the Dean's office on a half time basis as Associate Dean until the present time. As the School and the Medical Center continue to grow, he has found it increasingly difficult to maintain efforts in the two areas and has chosen this year to return full time to radiology for the benefit of the further development of the academic research programs in that department. The School of Medicine and the University are deeply indebted to Dr. Lodwick for the fine leadership which he has given to the School and for the many contributions he has made, not alone to the programs of the Medical Center, but to those in the general University as well. He will, of course, continue to serve on the executive faculty and on numerous statewide endeavors representing the School of Medicine.

Dr. William H. Anderson has recently been appointed as associate professor of psychiatry and will become superintendent of the new Mid-Missouri Mental Health Center when it begins operation. Dr. Anderson was a Colonel in the Army and has retired from the service and his post as Chief of the Department of Psychiatry and Neurology at Walter Reed Hospital to assume this new position. He will function as a member of the Department of Psychiatry under Dr. James M. A. Weiss, Chairman of that Department. Both the State Division of Mental Diseases and the University feel they were fortunate in being able to attract a person of his ability to this most important post.

Dr. Sherwood Baker came to the University of Missouri in October of last year as the first full time individual specifically representing general practice. He has been in general practice for a period of 17 years in Mount Morris, Ill., and came to the University as Chief of the Section of General Practice in the Department of Community Health and Medical Practice. He will be in charge of the General Practice Residency program, the Preceptorship Program, and will cooperate with the State Medical Association on physician placement when it involves alumni of the University of Missouri. Dr. Baker has already visited a great many of the local medical societies and will perform a key role in the exploration of possible cooperative endeavors between the School of Medicine and full time practitioners in the state.

Gail Bank, a member of the Extension Division, has joined the staff on a full time basis as Executive Director of the Postgraduate Program. He is currently working on a Ph.D. degree from the University of Chicago in adult education, and his leadership is expected to provide a great deal of strength for the growing postgraduate program.

Dr. Robert J. Jackson, Chairman of the Department of Pediatrics, has returned after a sabbatical leave in Lebanon, where he served as visiting professor at the American University at Beirut and was instrumental in setting up studies for the investigation of the nutritive value of human milk.

It is impractical to attempt to list by name all of the new persons who have joined the faculty, but many exceptional individuals have joined the staff during the last year. The evidence of the productiveness of the staff is quite clear through the several texts and a growing list of scientific publications which have appeared to their credit. All of the medical and surgical specialties are now represented on the faculty. The students and house staff are assured of the highest quality in the teaching and patient care programs in which they participate.

A number of full time positions have been filled at Kansas City General Hospital and Children's Mercy Hospital during the last year. Dr. John Arnold has assumed the post as Head of the Department of Internal Medicine; Dr. James Elam heads the Department of Anesthesiology; Dr. Ned Smull is now Head of the Department of Pediatrics and Director of Children's Mercy Hospital; Dr. Ide Smith is Head of Pediatric Surgery; and Dr. Charles Poser has accepted the post as Chief of the Section of Neurology to be effective July 1. These appointments carry regular University status, and designate the first of the growing group of individuals who are dedicating their efforts toward continuing the improvement of the programs at Kansas City General by bringing them into a status comparable with other teaching medical centers. Other full time staff have been added, but again for lack of space, only those who are in charge of programs have been mentioned.

From the Ecology Field Station on the Columbia campus, Dr. James E. Banta has been called by the U. S. Public Health Service to serve as Deputy Medical Director of the Peace Corps. His replacement as chief of the Field Station will be Dr. Gerald H. Payne, a member of the Public Health Service who previously was an assistant professor of Preventive Medicine at the University of Utah. He will begin his new duties in the near future.

The Woodhaven Christian Home for Children, which has an affiliation with the University, is now in the process of adding staff and admitting patients. Dr. James M. Pickens from the faculty of the Department of Pediatrics has accepted the position as Medical Director, and Dr. Rodman P. Kabrick, clinical psychologist, has assumed the post of psychologist in the new institution. The affiliation between Woodhaven and the University includes a number of the divisions of the University, and hopefully this will develop as an outstanding example of collaboration between disciplines for the benefit of exceptional children.

GENERAL PERSPECTIVES OF THE MEDICAL CENTER PROGRAM

In an era when health and scientific information is increasing at an incredible rate, the most acute problem which faces practitioners and medical schools is the need for the development and use of new methods for the distribution of health care. To say it in another manner, although it is technically and potentially possible for an individual to receive much better health care now than he would have received even five years ago, the gap between that which might be given and that which is actually delivered is widening rather than narrowing. In addition to the need for each of the clinical disciplines to study carefully its own role, it has become apparent to Schools of Medicine across the country that there must be developed a group of individuals in a discipline which would study this as a problem in itself. It was to this purpose that the previous Department of Preventive Medicine and Public Health of the University of Missouri School of Medicine was changed to the Department of Community Health and Medical Practice. Under the guidance and leadership of Dr. Carl J. Marienfeld, who also serves as Medical Director for the Missouri State Crippled Children's Service, there have been gathered an impressive group of faculty members in the fields of physical medicine, social work, sociology, anthropology, economics, epidemiology, statistics and administration. In collaboration with the State Division of Health through their Program Development Unit, and in cooperation with a number of departments of the University, this group has moved steadily forward in the study of the problem. While any single group will only be able to touch upon a few selected items, the type of momentum which has been developed and the general example of an approach to the problem should be of value to many other institutions.

Affiliations.—The affiliations which have been formed by the School of Medicine with other institutions also reflect this concern with the complexities of modern health care. In each of the institutions with which an affiliation has been established, a different type of medical care program will be found and, thus, a different opportunity is afforded to study technics for improving that type of care. This includes the new VA Hospital which will be built in Columbia in the near future.

Present affiliations include Kansas City General Hospital, Children's Mercy Hospital in Kansas City, and the new Intensive Treatment Center in Kansas City; Ellis Fischel Hospital, Woodhaven Home and Boone County Hospital (for nursing) in Columbia and St. Luke's Hospital in St. Louis.

NEW PROGRAMS

Mid-Missouri Mental Health Center.—The State Division of Mental Diseases will be letting contracts for the construction of a 120-bed Mid-Missouri Mental Health Center in Columbia sometime during the summer months. This will be a unit to provide intensive treatment for emotional disorders for patients of all ages and will have one ward dedicated to the problems of alcoholism.

In this cooperative program, full medicolegal responsibility will be retained for the service portions of the program by the Division of Mental Diseases. The academic programs and research programs will be under the guidance and sponsorship of the University. The building itself will be attached to the present Medical Center complex so that patients may move freely from one portion of the building to another. Duplication of services in the two institutions will be avoided whenever possible. Cooperative programs will include joint use of the kitchen, food service facilities, x-ray, central laboratory, pharmacy and other similar services. It is illustrative of the way in which needs of the patients can be met while at the same time the by-products of their care can be used to markedly increase educational opportunities for those people who will be providing such care in the future. This is particularly important in Missouri where there exists such a shortage of individuals who have training in the mental health field.

Veteran's Administration Hospital.—Present plans call for a 480 bed VA Hospital to be under construction in Columbia in 1965 and completed in 1967. The new facility, which will be connected by an underground tunnel to the present Medical Center complex, will provide 240 beds for pychiatric and neurologic problems and 240 beds for general medical and surgical care. This hospital will be under a Dean's Committee administration, which means that the professional staff will be members of the Medical Center faculty and that residents and students who are in training in the University will be able to receive a significant portion of their experience in this hospital as a part of the care program. This, again, epitomizes the wisdom of providing service to patients in an area where education can function as a by-product of such care, thus rendering the highest quality of medical care and, at the same time, providing a significant augmentation to the educational program without constructing additional facilities for that purpose.

Computer Program.—The computer program is mentioned here only for the sake of completeness. An article appears elsewhere in this issue describing the general nature and intent of this program. Suffice it to say that one of the great problems in the distribution of health care has been in the growing complexity, amounts and inter-relationships of the data related to health care. It has become almost impossible to keep an adequate medical history on a mobile population. It may well be that electronic data storage and transmission will provide this answer, among many others. The article by Dr. Lindberg gives further details.

Construction.—As was indicated in the last report, the Health Research Facilities Branch of the National Institutes of Health allotted $750,000 to the University of Missouri School of Medicine in recognition of the strength of its research program and the need for additional space in which to pursue that program. The State Legislature in a forward looking manner appropriated the matching $750,000 and before this article goes to press, the new building should be under construction. This will provide an additional five stories for the connecting wing between the present hospital and the Medical Sciences Building and an additional three stories on the west end of the present Medical Sciences Building. In addition, the University has been able to obtain funds from private sources to build three stories on the northern wing of the Medical Sciences Building which will be leased to the U. S. Public Health Service Ecology Field Station for their use, thus giving them more modern quarters and providing a closer relationship to the medical staff, which is important in their work.

Projections for the Future.—Because of inadequate space for class rooms and faculty, it has been necessary this year to limit the number of students who could be accepted into the program of the School of Nursing. In a time when a great shortage of nurses exists, this seems a peculiar contradiction. In addition, the School of Medicine has had to limit its enrollment to 85, although clinical material is available to take classes of 100 or slightly more. As was mentioned previously, this limitation, too, is based upon lack of space for class rooms and space for faculty members. Also the present Outpatient Clinic facilities are completely inadequate to handle the volume of patients who are now coming, and expansion in this area is vital both for the benefit of services to the patient as well as for the educational program. If companion facilities were available to expand the Outpatient Clinic and the present Medical Sciences Building, there is little doubt but that both the nursing and medical school classes could be increased by as much as 20 to 25 per cent with only modest increase in operational costs. It is therefore the intent of the School of Medicine to seek out gift and grant sources which may be used to assist in this and to request from the coming legislature the matching money to allow this much needed growth.

Major Problems.—The Medical Center has now been in operation for about eight years. Most of the original equipment in this building is still in use and one of the major problems now facing the Center is the replacement of obsolete and worn out equipment. The problem of obsolescence is easily understood if one recognizes that the amount of medical information available is doubling each 10 years. This means that the supporting diagnostic and therapeutic equipment must be modified in accord with the new information. This is particularly true in radiology, but equally true in laboratories and other areas. If the Medical Center is to keep pace with the advancement in health care, the time has come when a significant portion of this equipment must be replaced because of obsolescence. An additional and substantial amount will need to be retired because it is now badly worn. A request will be taken to the legislature for the first of several installments of funds for this purpose and it is hoped that the replacement process will be adopted on a regular basis, following a longitudinally developed plan.

Although the majority of physicians in the state now understand the program of the Medical Center and are quite supportive of the way in which it must operate in accepting patients and in handling the consultations which it renders, there are still enough members of the healing arts who do not understand to create some problems in communication. Booklets are being prepared, and a number of staff members are spending time in community meetings in an attempt to explain these practices so that it will be possible for any one who is interested to be informed and to understand the workings of the Medical Center. Only by using a selective referral basis is it possible in a 441 bed hospital to accept and to teach the large number of students and men in residency training. The present arrangement provides a low tax cost and an extremely high educational result. It is hoped that this approach will be understood and continually supported by practitioners and the public alike. It is believed that the University should serve as a consultation source but that continuing care must remain with the family physician and the community hospital.

While the number of applicants to the Medical School has increased considerably in the last two or three years, there is still a great need for support and assistance from alumni and from practitioners throughout the state. The future of the profession is entirely dependent upon the caliber of young men who can be attracted into it. In this instance, all members of the Medical Association are urged to help either this school, or the school of their choice, in recruiting qualified young men for the practice of medicine.

Although the State Medical Association has temporarily met the immediate needs for loan funds for students, there still is much more to be done before there can exist within the State of Missouri a revolving fund of money large enough to meet all the needs for loans to medical students. Since once a fund is established it is completely self-supporting and since its establishment would reduce, if not eliminate, the needs of dependence upon federal sources of support for this purpose, it is urged that everyone give serious thought to the ways in which they can help to increase support of the Missouri State Medical Foundation.

Finally, the largest single investment which the state and the University have in the Medical Center is in its operating budget. Hopefully, in order to gain the most from these expenditures, construction money will be forthcoming in large enough amounts to permit the operational funds to be expended in the best possible manner. It is sobering to recognize that each two years sees an operational expenditure which is equivalent to the total cost of the Medical Center physical plant. Money wisely spent for expanded space and additional facilities will be compensated many times over by increased efficiency in the use of the personnel who work within those environs. Certainly, physical facilities which are adequate both in appointment and in size are a necessary ingredient if the taxpayer is to get full return.

SUMMARY

In conclusion, this has been a rewarding four and one half years in which the warm support of many people and the intelligent and concerted activities of an enthusiastic faculty have produced results which are almost unbelievable. The growth of the School of Medicine, both academically and in scope of service, has far exceeded the fondest hopes of even the most enthusiastic supporters. This has been due largely to the understanding of the members of the practicing profession throughout the state and citizens of the state at large. This growth and development can be furthered only if the School can continue to have the interest, the constructive criticism, the advice and the counsel of each of the individuals who has contact with it. Our pledge is never to forget that the only reason for the existence of a School of Medicine is to better the health of society at large, and to do this primarily through producing better practitioners and members of the healing arts profession. It is hoped that a close working relationship will continue to be built between those who bear prime responsibilities for health service in the communities and their School of Medicine in Columbia.

WILLIAM D. MAYER, M.D., *Columbia*

Development of a New Curriculum at the University of Missouri School of Medicine

A review of the new curriculum at the University of Missouri School of Medicine is presented.

Dr. Mayer is Assistant Dean, Assistant Professor of Pathology and Chairman of the Committee on Education of the University.

MORE THAN FOUR years ago, in January 1960, the faculty of the University of Missouri School of Medicine began a broad review of its medical school curriculum. This review has resulted in significant changes in the curriculum which will be initiated in June and September, 1964. It is felt that the reading audience of MISSOURI MEDICINE might be interested in a summary of this new curriculum.

The review of the curriculum began with a survey of the educational programs then in existence in the medical schools in the United States. University of Missouri faculty members visited selected medical schools in order to gain first hand information of their educational programs. The reports of these visits were discussed at length by members of the Committee on Education. The Committee then drafted a set of principles and goals of medical education adapted to the needs of the State of Missouri and the characteristics of the University of Missouri School of Medicine. These goals were reported at some length in the April 1961 issue of MISSOURI MEDICINE by Dr. Gwilym S. Lodwick, the Associate Dean and Chairman of the Committee on Education. The Committee and the Executive Faculty of the School of Medicine then began the difficult task of constructing a curriculum which would best meet these goals.

In addition to the efforts of the Committee on Education and the Executive Faculty, further discussion was engaged by other faculty members through their departments and through the medium of two conferences on medical education. The first of these conferences entitled, "The Changing Character of Medical Education" was held in September 1962. Participating in this conference were several guest authorities as well as the entire faculty. The second conference held in September 1963, was entitled, "The Faculty Forum on the New Curriculum" and functioned as a sounding board for the ideas which had evolved in the intervening year.

All of the discussions centered around the desire of the faculty to provide the student with an opportunity to acquire the fundamental knowledge and skills of medical science and practice while still providing him the freedom and flexibility necessary for his maximal individual development. In medicine, as in all educational systems, it is obvious that the educational needs of each individual vary greatly depending upon the student's native ability as well as his previous educational experiences and future goals. At the same time, a certain core of knowledge and skills should be acquired by each individual with the degree of Doctor of Medicine. What is needed is a curriculum which will permit the establishment of this core within the framework of freedom for individual growth.

FIRST AND SECOND YEARS

The skeleton of the new curriculum is outlined in table 1. The first two years in the new curriculum have approximately 500 contact (lecture and laboratory) hours per semester. This represents significant reduction in contact time and provides the student with the equivalent of two half days' free time within a five and one half day week. The free time will be available to the student for additional course work, leisure or further effort on his medical course work.

Into the first year curriculum have been added two courses which are currently not offered. The first of these is a course entitled "Correlation" which will present clinical material that is particularly pertinent to the basic science studies of a given week. The second is a course in "Human Ecology and Behavioral Science." This course will provide the student with concepts of man built on his genetic, anthropologic, sociologic and psychologic backgrounds. Thus, early in his

TABLE 1
NEW CURRICULUM

FIRST YEAR

First Semester September-January	HOURS	*Second Semester February-May*	HOURS
Anatomy	172	Anatomy	348
Biochemistry	220	Physiology	92
Human Ecology and Behavioral Science	60	Human Ecology and Behavioral Science	60
Biophysics	48		
Correlation	12	Correlation	12
	512		512

SECOND YEAR

First Semester September-January	HOURS	*Second Semester February-May*	HOURS
Microbiology	192	Pathology	256
Pathology	128	Pharmacology	144
Physiology	96	Introduction to Medicine	80
Introduction to Medicine	80	Radiology	16
	496		496

THIRD AND FOURTH YEAR

This is a two year experience commencing in June following the completion of the second year and ending at graduation in June two years later. The two year period is divided into 10 nine week blocks and two seven week blocks. During the 12 blocks the student is required to take the following:

1. Medicine	2 blocks
2. Surgery	2 blocks
3. Community Health-Preceptorship-Radiology	1 block
4. Obstetrics-Gynecology	1 block
5. Pediatrics	1 block
6. Psychiatry	1 block
7. Elective	1 block
8. Free Time	3 blocks

The elective block must be spent in an educational pursuit. Numerous opportunities are available to the student both within and without the Medical Center. The free time blocks may be spent by the student in any way he chooses. However, educational opportunities of great variety will be available to the individual if he chooses to use this free time in further educational experience.

medical school training the student will be exposed to a broad picture of man and his environment.

In the second year, a course in "Introduction to Medicine" has been added. This will provide the student with his introduction to clinical medicine. It will replace individual courses currently being offered in physical diagnosis and history taking, psychiatry, introduction to surgery, obstetrics and preventive medicine. By combining these courses, unnecessary duplication of material will be removed and the students will have a unified primary contact with clinical medicine. It is expected that a single course on introduction to clinical medicine will also provide a better pedagogic approach. Frequently the student's problem is not that he has too much to do, but that it is in too many different areas or directions.

THIRD AND FOURTH YEAR

The third and fourth year programs in the new curriculum represent a greater departure from programs existing elsewhere. One of the greatest concerns with the current third and fourth year was the lack of flexibility. It was felt that the clinical experience and responsibilities available to students was of a high quality. However, there is little opportunity for one student to vary his experience significantly from his peers. From the time our students commence their third year in September until they complete their fourth year some twenty-one months later, they have only six weeks of elective opportunity.

Ways were sought by which the individual student's third and fourth year curriculum might be modified to suit his own individual needs and not appreciably interfere with his core clinical experience. It was decided that by incorporating the vacation time normally present in the summer between the second and third year (students currently have no summer vacation between the third and fourth years) the time might be more usable to the student. Out of this concept came the two year block experience outlined in table 1.

In the new third and fourth year curriculum, the student will have a maximum of 36 weeks in which he can seek additional experiences in clinical medicine, research and other educational opportunities. The student will be required to spend nine weeks of this time in educational pursuit while 27 weeks will be totally at the discretion of the student, that is, free time.

In a survey of the current second year class, who will be participating in the new program during the coming year, it was indicated that approximately one third of their free time will be spent in elective type endeavors within the Medical Center. Needless to say, it is encouraging to note that the students voluntarily are willing to give up vacation time in this proportion to spend it with their faculty. Approximately an additional one third of the free time will be spent in medical or paramedical pursuits outside the Medical Center, while the remaining one third will be used on vacation or in nonmedical positions for gainful employment. Already some of the students are planning on extended educational experiences in other Medical Centers in this country and abroad. Some are looking forward to working on Master's degrees in scientific areas.

Another innovation in the final two years is the Community Health-Preceptorship-Radiology block. During four weeks of this block, the student will function in a preceptorship with a practicing physician in a relatively small community in the state. This is an expansion of the preceptorial program already underway in the curriculum. It was felt that all students should have an opportunity to participate in the practice of medicine in a setting other than the University Medical Center. The preceptorship block provides this opportunity.

Also incorporated into the new curriculum will be a set of lectures and conferences. There will be daily one hour noon lectures for third and fourth year students on Monday, Tuesday and Wednesday of each week. There will thus be a sequence of 300 hours of lecture material in the clinical sciences provided on a two year basis. Saturday mornings, from 10:00 a.m. to 12:00 noon, will be devoted to a set of four conferences that will be rotational. One week will be devoted to an expanded C.P.C.; the second to a therapeutic conference; the third to a correlative clinic and the fourth to a clinical-basic science conference. It is anticipated that these programs will be attended not only by the third and fourth year students, but the faculty and house staff as well. This time has also been made available to the first and second year students to attend as seem appropriate. In addition, it is hoped that physicians and faculty outside of the Medical Center will feel free to attend and participate in these weekly conferences.

COMMENTS

An interesting by-product of the discussions of the curriculum, by faculty and students alike, has been the increased attention of all to the educational process. Concomitant with the discussions, intra-departmental changes have occurred in the teaching of courses which have improved them within the current curricular framework. These advances will of course, carry over into the new curriculum.

SUMMARY

A brief review of the new curriculum of the University of Missouri School of Medicine has been presented. It is believed the proposed curriculum presents the student with the opportunity of acquiring the necessary core knowledge and skills of the Doctor of Medicine while maintaining sufficient flexibility to permit maximal development of individual talents and abilities.

It is realized that the essence of any learning situation is in the exchange of ideas between intelligent, well motivated students and dedicated, knowledgeable faculty members. It is anticipated that the new curriculum will constitute a catalyst for this reaction.

DONALD A. B. LINDBERG, M.D., ***Columbia***

A Computer in Medicine

It will be my purpose in this article to report on the program surrounding the installation of an IBM 1410 electronic digital computer at the University of Missouri Medical Center. To do this it will be necessary to discuss computing machines and medical education in a general manner.

The installation of a 1410 computer facility at the University of Missouri Medical Center is discussed.

Dr. Lindberg is Assistant Professor of Pathology and Director of the Medical Center Computer Program.

This program is supported in part by the U. S. Public Health Service grants 5-T1-GM 520-03, T2-CA 5063-10 and 1-SO1-FR-05387-01.

First, one should realize that if this article were to appear in a journal of physics, engineering, mathematics, statistics or many chemical publications, no preamble or justification for a discussion of computers would be required. Likewise, accountants, bankers, wholesalers, missilemen and a variety of new frontiersmen have many years ago come to grips with computer technology. It was not so many years ago when medicine was the most exciting new frontier. Medicine is not accustomed to being found in the rear ranks of those following after a scientific breakthrough. Yet in the field of modern communications and data processing technics medicine has truly missed an opportunity in not investigating the contribution of this powerful new technology.

The aim of the Medical Center Computer Program is to do just this, to investigate the proper role of a modern electronic digital computer in the practice and teaching of medicine. In truth, it is not now known what the role should be. There are many projects which are being actively pursued—many more than can be presented in detail—but one cannot say which is the really important one. The one, that is, which will take the teaching of medicine out of the realm of pedagogy into that of graduate education, or the one which will improve the diagnostic approach to a patient, or the as yet undeveloped technic which will make the medical literature and patient care data of our burgeoning medical record rooms a living record which can offer daily teaching to us as students and practitioners. It is not even known that one of these great discoveries is actually included in the initial projects. One thing known, however, is the expertise of the accountants and missile builders with these computing machines will never result in a ready made system for the practice or teaching of medicine. That will only be done by physicians.

Laboratory Data Transmission and Retrieval

A major initial project is the development of a system for reporting all clinical laboratory determinations through the computer. "Through" is the important part of this concept. At this moment the determinations from the clinical bacteriology, serology and chemistry laboratories are transmitted to the ward by a preliminary system based on an IBM-1912 Card Reader and Teletype Corporation transmitting equipment. This is important because it means that this data is already in a physical form, i.e., punched cards, which makes it immediately available for

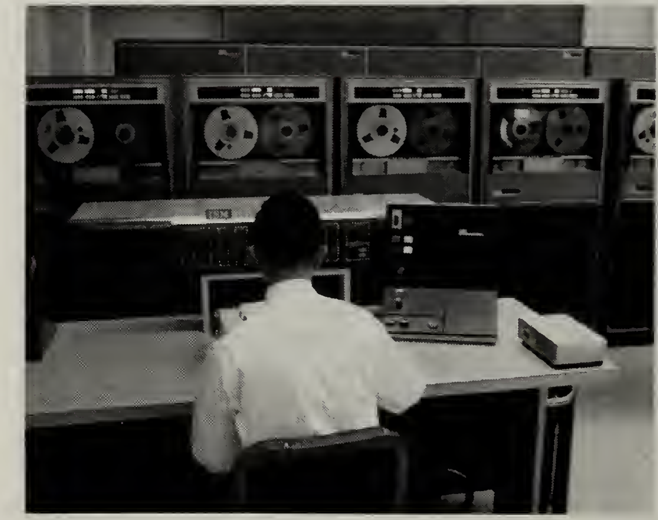

Fig. 1. 1410 Computer Facility at the University of Missouri Medical Center.

computer examination. In the new system being developed the data will pass through the computer before being transmitted. This means that the computer can be programmed to examine the data and to weed out errors of clerical or laboratory technic, inverted patient unit numbers, mis-addressed reports, or errors in calculation, to evaluate it from the vantage point of up-to-the-minute quality controls, to compare the result with previously recorded results on that same patient which have been retained in memory, and in short to bring into consideration the multitude of factors which are almost beyond the patience of a human being. The computer cannot exercise medical judgment. We will be content initially if it merely manages to accurately collect, route and record the data. In return for this we may gradually give it more important tasks.

Initially its major contribution will be in making rapidly available the past data of the hospital laboratories. Approximately 500,000 determinations per year are performed here; so that each attempt at review of the records has in the past been a research effort in itself. This particular task is something well within the capability of a computer system. No technological breakthrough is necessary in order for a modern computer to sort through two or three million laboratory determinations. It is only necessary to do the initial work which provides these data in computer accessible form.

This approach to data processing requires some elaboration.

DATA RETRIEVAL

While there are some reasonably complex arithmetical calculations in medicine, these are not prominent in the practice of the art. One seldom even sees a second decimal place in a hospital. Medicine needs computers because such systems can function as rapid data processing and retrieval devices, not because of the computations required. There is, of course, also the minority view that inadequate mathematical training automatically limits the potential use of mathematics. See various lay press articles.[1, 2] Whether or not there are fertile unexplored mathematical valleys in medicine, there are certainly many well known unexamined mounds of patient care data in the medical record rooms. These are the objects of the initial treasure hunt.

Data which has been coded and written to magnetic tape can be read in sequential fashion at 20,000 characters per second. Data written to magnetic disc storage can be read in totally random fashion at 9,000 characters per second. Magnetic tape drives (although not as fast as those mentioned) and a 1301 Random Access Disc File are part of our computer installation. Along with this input-output oriented computer system is a 1403 high speed printer (800 printed lines per minute).

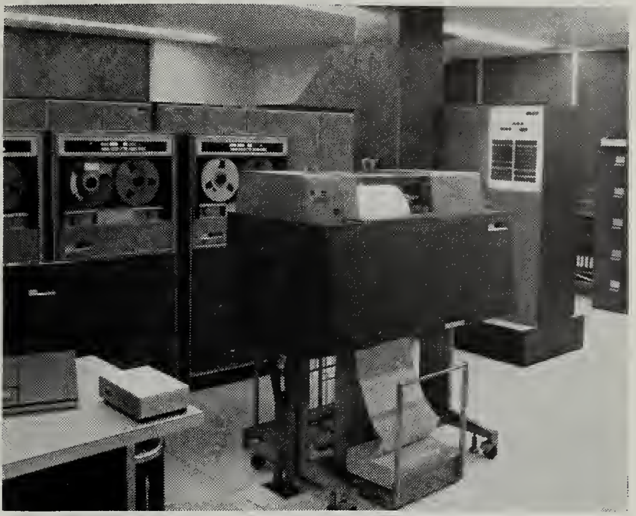

Fig. 2. Another view of the computer.

With these devices it is planned to record as much as possible of the significant medical record on tape and to retrieve and rework the data by use of the computer.

OTHER SPECIFIC PROJECTS

Examples of specific files of patient material which are being processed include the tumor registry, the hospital discharge diagnosis and operations file and the surgical pathology file. Scheduled for subsequent processing are the radiology diagnostic file and the coded records of the interpretation of the Heart Station electrocardiographs. It should be noted that it is possible to process such data only because the physicians responsible for these service areas have taken pains to code and preserve their own valuable data in the years past before a computer was readily available to process it.

The areas of the significant medical record which yield themselves least readily to electronic data processing are the interrogative medical history and the physical examination. Here no suitable codings or classifications exist. The data are largely prose and as such are difficult to deal with in a computer. Once coded, however, these too are easily processed; so in the beginning it will be necessary to create a coding system. The task has been initiated for the ophthalmology-otolaryngology clinic at the Medical Center. Plans are also being formulated for encoding and processing interrogative medical history and physical examination data from a special medical clinic at the Kansas City General Hospital.

This brief list does not include all of the separate files available but includes the initial work. In addition there are about 40 research projects which relate to the work of individual investigators and a number of hospital administrative tasks which are being performed. These two categories of computer jobs include some interesting pieces of work but do not necessarily relate to the prime objective of the moment, which is the encompassing of patient care data.

COMPUTER IN MEDICAL TEACHING

So many judgments about patients and medical problems hinge on a statistical sort of evaluation that it has seemed reasonable to begin to introduce these technics in the teaching situation. At least, a computer system offers a medical student or physician a means of rapidly searching large numbers of hospital records. This ability can supplement or replace the role of a teacher in "telling" the student what diagnoses are likely or rare. The student can draw his own conclusions from the facts of hospital experience. For example, it will be no news to the reader that a patient with fluffy peripheral and midfield pulmonary infiltrates who resides in Missouri has a likelihood of having histoplasmosis which is grossly different from that of a similar patient who resides in Boston, Mass. How different the chances really are is something no one can say at present. With proper handling of data we hope to be able to make statistical statements about this sort of question following processing of the patient data.

Another example of a question which arises in student teaching groups concerns the antibiotic sensitivity pattern of microorganisms. "Has there been an increase in the number of penicillin resistant Staphylococcus aureus isolates in this hospital in the past four or five years?" It is now possible to give an exact report on the isolation and antibiotic susceptibility pattern of this organism in the period during which teletype transmission of results has been in use. The old records are being encoded manually. The current reports automatically become incorporated in the computer system.

Another facet of the teaching program is the use of the computer as a case retrieval device. As the number of cases in a hospital builds up, the use of simple tabulator card processing devices to search the diagnosis file, even to recover only the unit numbers of patients, becomes increasingly difficult. To request the unit numbers of individuals who "have diagnoses A, B and C, who were seen in 1961, and came from counties 1, 2 or 3" becomes almost impossible without a computer system. Fortunately one of the staff physicians has asked this sort of question recently and we now know that it is relatively easily answered with the new computer system.

THE PHYSICIAN AND DATA PROCESSING

Something should be said of the reaction of the faculty and staff of the School of Medicine to the arrival of a large computing device. Physicians seem to enjoy picturing themselves as hopeless disorganized, harried, muddlers-through-life who would be totally lost without the combined assistance of at least a wife, a secretary and nurse. Consequently, to be openly grateful for a neat, clean, orderly computer would run counter to the physician's self image. Fortunately, there are inaccuracies in this description. First, computer operations are neat, clean and orderly only when viewed from a distance. And second, most good physicians are actually compulsively good record keepers and are furthermore devoted to their own data and patients. Thus, a surprising number of friendly colleagues have suddenly produced quantities of carefully kept accurate data for computer processing in the new facility.

Based on the first three months' experience, I predict the development of a romance between physicians and computers which will rival that seen with stethescopes and electrocardiographs. It will be a great but pleasant challenge to see that this latest affair of the heart makes a significant contribution to medical knowledge and wisdom.

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G. R. RIDINGS, M.D., ***Columbia***

Irradiation in the Management Of Peptic Ulcer

THE RADIATION therapist is so much a full time oncologist that it is easy to forget that irradiation is, at times, useful in disorders other than cancer. One of these is peptic ulcer.

Even though irradiation has been used in treatment of peptic ulcer for more than 45 years[1-4] its use has, mainly, been limited to a few isolated areas. Since the first blush of enthusiasm for gastric freezing is now fading due to its hazards,[5] this is perhaps an appropriate time to be reminded of the older technic—radiation.

Irradiation effects on the stomach were recognized early and were shown in experimental work.[6, 8] Subsequent investigators[8-12] have explored this in further detail. In summary, the gastric mucosa is more sensitive to irradiation than is the skin; other parts of the stomach are unaffected except by high doses of irradiation. The histologic changes occur mainly in the peptic glands, less in the mucous glands. The pepsin-producing chief cells appear to be somewhat more sensitive than the acid-producing parietal cells. About one week following irradiation the first histologic changes appear: asymptomatic hyperemia, edema and exudation. In the gland tubules the earliest changes are in the depths of the glands with destruction of the chief and parietal cells, while the more resistant mucous cells of the gland neck remain, creating deep, bottle-shaped pits. In healing, there is downward proliferation of the neck cells, reconstituting the gland lining.

Functional changes may occur even before histologic lesions appear and, after 10 to 14 days, free acid may disappear and pepsin be considerably reduced. There may be permanent achlorhydria or reduced acid secretion. Clinically, the reduction of gastric acidity after irradiation is variable and unpredictable, even though there have been attempts to evolve parameters which would allow prediction.[13]

CLINICAL

Carpender and associates[14] analyzed 116 patients with gastric ulcer and 113 with duodenal ulcer, all with recurrent or persistent disease in the face of a medical regimen, followed five to 10 years. Most were given 1600 to 1700 r to the stomach in 10 days, along with continuation of their medical regimen. Of those with gastric ulcer, 53 per cent healed and remained so, healed but recurred in 40 per cent and persisted after irradiation in 6.7 per cent. Of those with duodenal ulcer 66 per cent were free of recurrences, 16 per cent were eventually subjected to surgery.

Palmer, et al.,[15, 16] in 723 patients, felt that the recurrence rate, as computed "per 100 patient years" dropped from 102 before irradiation to 17 after irradiation (medical regimen continued), a reduction of 83 per cent; also, that there was a reduction of severity of recurrent symptoms and of serious complications. They concluded that irradiation was a safe and valuable adjuvant.

Irradiation in the patient with peptic disease is discussed and it is pointed out that many patients can be benefitted when other forms of treatment have failed.

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G. Brown,[17] in a series of 81 patients, 44 with antroduodenectomy and gastroduodenal anastomosis followed in two months by 2000 r in three weeks, felt that postoperative irradiation improved results.

Kieffer, et al.,[18] in 23 patients with recurrent stomal ulcer following a Billroth II procedure, found that irradiation with 1800 r made it possible to bring many of these patients under medical management. They found that achlorhydria or marked hypochlorhydria lasting up to two years after irradiation was achieved in more than 50 per cent of these patients. Because this state may not be permanent and because recurrence of symptoms is preceded by rise in free acid, it is wise to follow the acid secretion with serial tests. If recurrence occurs it is feasible to retreat one or two times at intervals as close as six

TABLE 1

UMMC PATIENTS WITH PEPTIC ULCERATION TREATED BY IRRADIATION

*Case No.**	*Age*	*Site of Lesion*	*Symptoms; Complications*	*Yrs. w/Sx*	*Dose; Time*[1]	*Depression of Free Acid*	*Clinical Response*[3]	*Years Followed Since Rx*	*Other Comments*
1	57	Stomach; lesser curvature	Pain; mod. bleeding; NCOMM**	27	1780r, 13 days	100%, 2+ yrs.	Excellent	4½	Myocardial infarction
2	83	Stomach; greater curvature	Perforated; bleeding; n&v; NCOMM	12	2652r, 23 days	100%, immed. after irradiation	Good	2¼	
3	79	Antral & Duod.	Pain; n&v; NCOMM	6	1614r, 18 days	100%, immed. after irrad.; 45% return in 3 mos.	Failure	1	ASHD; Had previous unsuccessful gastric freeze
4	67	Duod.	n&v; Massive bleeding	2 da.	1596r, 17 days	[2]	Excellent for 4½ mos.; then readmitted with massive bleeding, to surgery and died postoperatively		Very senile, deaf, heart disease; not surgical candidate
5	75	Duod.	Pain; n&v; bleeding; NCOMM	12	[1]1668r, 13 days; [2]1608r, 10 days	[2]	Excellent for 3 years; pain recurred (no bleeding); re-treated; excellent to date (1 year)		
6	87	Duod.	Pain; n&v; bleeding; NCOMM	2	2380r, 24 days	70% at 4 months	Good	2¼	ASHD
7	46	Duod.	Pain; n&v; bleeding; NCOMM	20	[1]1558r, 14 days; [2]1796r, 11 days	[2]	Good; recurred; good since (4¾ yrs.)	6½	Extreme Cardio-resp. disease; steroid treatment
8	79	Duod.	Pain; n&v; bleeding; NCOMM	30	1609r, 16 days	100% at one month	Excellent	5	

NOTES:
* All cases were males; all still living except case No. 4.
** NCOMM: Not controlled on medical management.
[1] Dose in roentgens to the stomach; time in elapsed days.
[2] Insufficient data for evaluation.

[3] Clinical response
Excellent: Became asymptomatic.
Good: Asymptomatic except for brief episodes of gastric discomfort.
Fair: Symptoms improved but not eliminated.
Failure: No improvement.

months. There is evidence that if achlorhydria persists for more than three years no further ulceration need be expected.

These findings are, in the main, confirmed by others.[11, 13, 14, 16] Carpender, et al.[14] found that temporary achlorhydria was produced in 41 of 113 patients with gastric ulcer (previously uncontrolled), with complete healing in 40 of these, the healing persisting during the period of achlorhydria. In nine of these patients the achlorhydria persisted for one and one-half to 13 years, with no recurrences. In 24 patients persistent partial reduction of acidity was achieved; of these, only five had recurrence of ulceration. Patients in this series with duodenal ulceration showed a lesser degree of reduction of free acid, but a greater incidence of prolonged healing. The reason for this difference is not known.

C. H. Brown, et al.[19] found that, of 121 patients treated for complications of peptic ulceration, there was in 90 per cent more than 50 per cent decrease in acid production; in 63 per cent this persisted through the sixth month. They obtained a good response without ulceration in 72 per cent, questionable recurrence in 11 per cent and definite recurrence in 17 per cent.

At the University of Missouri Medical Center 10 patients have received irradiation in the course of their management for peptic ulcer. Eight are shown in table 1. Two are not included. One was unable to cooperate, even to lie still for a part of a minute; in the other, irradiation was attempted at a time after he had perforated, had massive bleeding, had surgical resection, had ruptured abdominal wall and bowel sutures, was bleeding, and had gross peritonitis and was preterminal.

All eight cases were considered as unsuitable for surgery because of conditions other than gastrointestinal. Most were quite old. All had severe peptic disease, most of long duration. All were kept on a medical regimen. The results in this group are favorable, even though these patients were not followed in a clinic in which this was a project, nor were they seen by people with great enthusiasm for this form of treatment. (Thus, an important element in this disease, psychotherapy, was missing insofar as irradiation results are concerned.)

The combination of any two technics, such as irradiation and a medical regimen, makes it difficult or impossible to evaluate them separately. Klein, et al.[2] treated 50 patients who could not be controlled on a medical regimen, many with complications. This was done with irradiation alone, off all medications and on a free diet, giving 1700 to 2000 r to the stomach in two to three weeks. The results were: 54 per cent excellent (symptom-free), 22 per cent fair (symptom-free except for short sporadic episodes of gastric distress), fair (symptoms better but not symptom-free), and 22 per cent failures (no relief). Of the 11 failures, six eventually had gastric resection; the other five were able to avoid surgery. Thus, of these cases which were failures under medical management and with complications, treated by irradiation alone, 71 per cent were cured of ulcerative disease and 88 per cent escaped the necessity of surgery.

RADIATION HAZARD

The question of hazards of irradiation has been discussed.[14, 16] There is occasional mild anorexia. In earlier years there was usually mild erythema of the skin in the irradiated field, occasionally some skin atrophy; with supervoltage these effects are entirely eliminated. There has not occurred any case of neoplasia or blood dyscrasia attributable to the irradiation. There is no real genetic hazard; practically all of these treated people were past the fifth decade of life; even those younger were in poor physical condition. In those cases which do come to surgery, these doses of irradiation have not created complications.[14, 16, 19, 20, 21]

DISCUSSION

So, it appears reasonable to conclude that irradiation is capable of reducing or eliminating the free acid of the stomach in a considerable proportion of cases; that there is a parallel between the depression of the free acid and the clinical response; that, even in these patients selected because of failure of other forms of management, there is a gritifying response in many; and, finally, that this is a safe and relatively atraumatic form of treatment.

What role, then should irradiation play in the management of peptic ulcer? Most workers agree there is a gratifying response in that it is best to use it in combination with medical management. Most seem to agree with these indications: (a) lack of control of disease following surgery; (b) failure on a medical regimen in a poor surgical-risk patient; (c) inability or unwillingness to adhere to other management. There is, however, not agreement on whether irradiation should be utilized prior to surgery. One should consider these aspects: (a) irradiation of this type is safe and atraumatic; gastric surgery is always a major procedure; (b) irradiation gives dramatic relief

(Continued on page 300)

WILLIAM V. MILLER, ***Columbia***

Chromosomes and Human Disease

The advent of antibiotics and tissue culture technics has made it possible to investigate a whole group of poorly understood disease entities. Bertram and Barr's 1949[1] discovery of the sex chromatin body also proved a useful tool for an understanding of sex chromosomal abnormalities. In 1956 Tjio and Levan[2] used these technics to revise the diploid human chromosomal complement to 46 from 48, a figure which had been accepted for more than half a century. Lejeune's[3] discovery in 1959 of a constant chromosomal abnormality in Mongolism demonstrated that chromosomal abnormalities were not necessarily lethal.

All human cells normally contain the same number of chromosomes and genes—regardless of tissue—but the chromosomes *per se* are distinguishable only during cell division. An exception to this rule may be the Barr sex chromatin body (figure 1) which is thought to represent part of one of the X chromosomes.[4, 5] In order to study human chromosomes blood is drawn in heparin, and the white cell-rich plasma is incubated in culture media for three days and allowed to grow. Colchicine is added (to stop spindle fiber formation) and the cells are incubated six more hours. The cells, many stopped in mitosis at metaphase, are washed and then placed in hypotonic solution to spread the chromosomes. They are then fixed and stained for microscopic and photographic analysis.

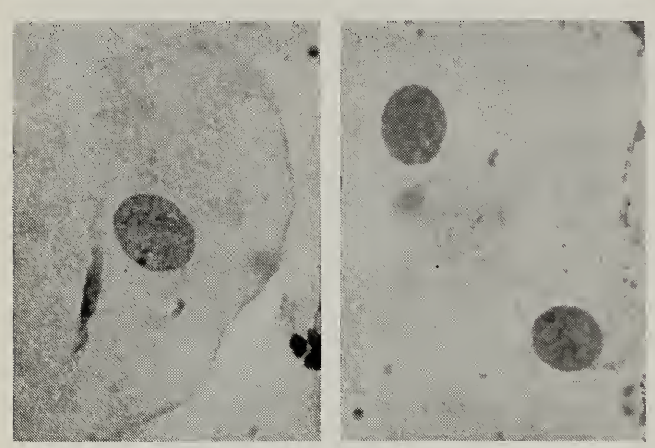

Fig. 1. Epithelial cells from a female (left) have a plano-convex pyknotic fragment on the nuclear membrane known as the Barr sex chromatin body. Cells from normal males (right) lack these bodies.

The chromosomes are arranged in descending order of size and grouped by centromere location.[6] Most have median or submedian centromeres, but a few have terminal centromeres (acrocentrics) (figure 2). These acrocentric chromosomes are associated with the nucleolus and are subject to considerable mechanical stress.[7] This relationship may account for the fact that anomalies of the acrocentrics are more common than those of the median and submedian chromosomes.[8]

Laboratory technics are outlined and suggested etiologies and mechanisms of chromosomal defects are discussed.

Mr. Miller is a Post Sophomore Student Fellow in the Department of Pathology under Pathology Training Grant 2G 520.

ETIOLOGY OF CHROMOSOME ABERRATIONS

Environmental factors are apparently responsible for many of the defects seen in the chromosomes. Experimental evidence indicates that irradiation with various high energy beams produces significant defects, not only at the gene level but at the gross chromosome level as well. Chronic disease of many types is associated with chromosome anomalies, and mutagenic viruses have been postulated but never demonstrated.[9] These, as well as other factors, may act by producing mutations in a genetic locus which controls normal cell division. The association of chromosome defects with increasing maternal age is well known, and it may be that increasing exposure to mutagenic agents accounts for this phenomenon. It is, however, difficult to account for the absence of similar findings in males.

MECHANISMS OF CHROMOSOME ANOMALIES

Cell division is a complicated maneuver normally resulting in daughter cells of identical constituency. Mitosis consists of five phases beginning in interphase, during which replication of the DNA helix occurs. During prophase, lysis of the nuclear membrane begins, the two cen-

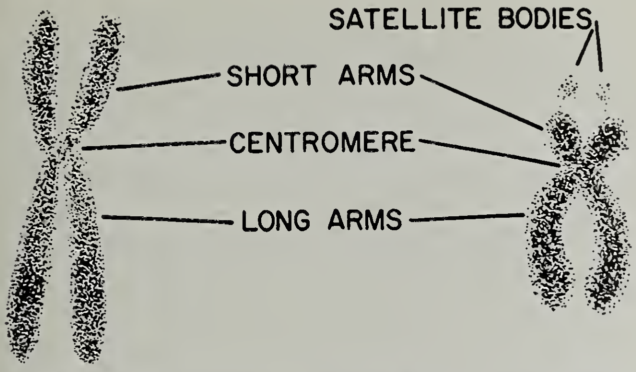

Fig. 2. Diagrammatic representation of submedian (left) and acrocentric (right) chromosomes as they appear in chromosome preparations.

trioles migrate toward the poles, and the double strands of chromatin united at the centromere appear as chromosomes. In metaphase the DNA helix contracts and the chromosomes assume the "X" or "wishbone" shape seen in karyotypes. The chromosomes migrate toward an "equatorial disc" in the center of the cell and the spindle apparatus forms, connecting centromere to centriole. It is here that colchicine acts to stop mitosis by preventing spindle fiber formation. During anaphase the centromeres are split and chromatids migrate toward the poles through shortening of the fibers of the spindle apparatus. Reconstitution of the nuclear membrane and complete cell division occur in telophase. The process of chromosomal splitting and migration toward poles is called disjunction. Errors of disjunction (non-disjunction) in which the chromatids are unequally distributed account for most abnormalities of chromosome number (aneuploidy) (figure 3). Mitotic non-disjunction produces chromosomal mosaicism, in which some of the body's cells may have abnormal chromosomal distribution while others do not.

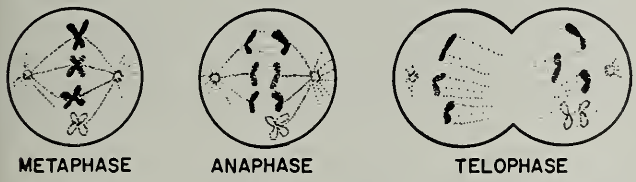

Fig. 3. Nondisjunctional cell division results in unequal distribution of chromatids to daughter cells.

Meiosis is a specialized form of cell division which accounts for the reduction of chromosome number from diploid (2n = 46) to the haploid (n = 23) distribution seen in germ cells. Meiosis differs from mitosis in several aspects:[8] (1) the DNA helix is reduplicated only once although two cell divisions occur, (2) chromosomes are arranged in homologous pairs at the equatorial plate (synapsis), (3) there is exchange of genetic information (crossing-over) between homologous chromosome pairs at points of contact. Meiotic division involves two successive divisions, the first of which (reductional division) produces two haploid daughter cells. The second division (equational) separates the chromosomes at their centromere producing a second generation of haploid daughter cells. In both of the meiotic divisions there are five phases similar to mitosis. Meiotic disjunction occurs twice, of course, first with the separation of the chromosome pairs in anaphase I, and later in anaphase II. Meiotic disjunction is prone to many accidents of which non-disjunction is probably the most common. Apparently most structural anomalies of chromosomes arise in meiotic gametogenesis since structural anomalies affecting all of the body's cells are clinically much more common than structurally anomalous mosaic.

Translocation occurs when two chromatids on separate chromosomes are fractured and the resulting fragments reunite with the "wrong" chromosome, that is, neither the original nor the homologous chromosome. Chromosomes bearing translocated fragments undergo mitotic and meiotic non-disjunction in the usual manner and can be transmitted to offspring. Fertilization of a gamete with a translocated chromosome makes the zygote effectively trisomic for the genes present on the translocated fragment (see figure 4).

If one of the fragmented chromatids attaches to the chromosome that already carries the same loci that are present in the fragment, then one or several loci are duplicated within the same chromosome. Fertilization of the germ cell with duplicated loci produces a zygote which is functionally trisomic for the affected genes. This process of translocation of a fragment to its homogenous chromatid is called "duplication" and the resultant gamete is said to be "partially trisomic."

Deletion, inversion and isochromosome formation are rare cytogenetic mechanisms which have seldom been implicated in man. Deletions is the result of fracture of a chromatid with failure to reunite. Inversion occurs when a fractured chromatid with failure to reunite. Inversion occurs when a fractured chromatid becomes reattached to the point of fracture but upside down to its point of origin. Isochromosomes are chromosomes in which the genetic information on both sides of the centromere is identical.

Clinical Manifestations of Chromosome Abnormalities

Mongolism (Down's Syndrome).—Although it had been suspected for some time that mongolism might be due to a chromosome anomaly, it was not until 1959 that Lejeune[3] demonstrated trisomy of the chromosome pair numbered 21 (figure 4). Since that time Mongoloid children have been reported with translocation, inversion and mosaicism, as well as trisomy. A frequent disorder occurring at least once in 600 births, its clinical manifestations are well known. Often associated are severe mental retardation, multiple skeletal anomalies and atrial septal defect.

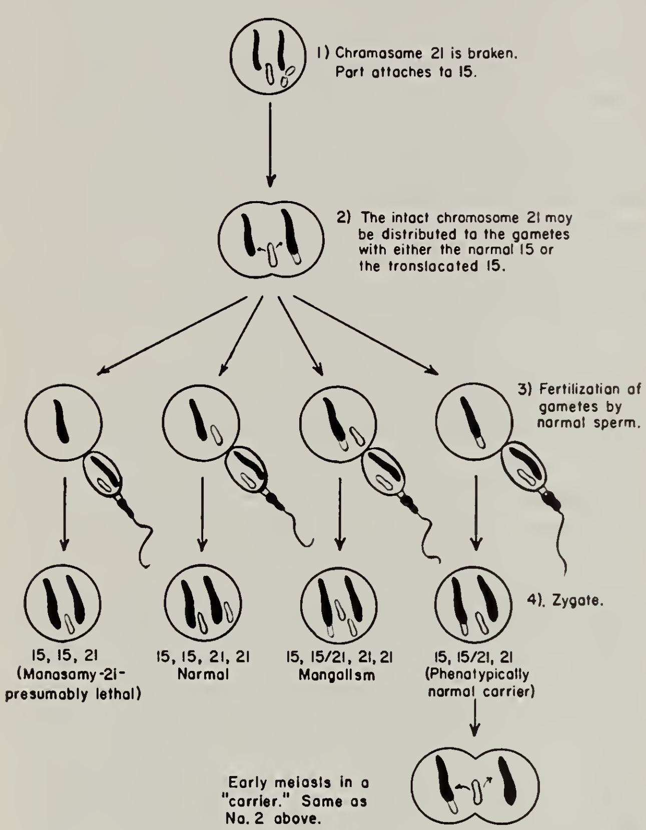
1) Chromosome 21 is broken. Part attaches to 15.
2) The intact chromosome 21 may be distributed to the gametes with either the normal 15 or the translocated 15.
3) Fertilization of gametes by normal sperm.
4). Zygote.
15, 15, 21 (Monosomy-21- presumably lethal)
15, 15, 21, 21 Normal
15, 15/21, 21, 21 Mongolism
15, 15/21, 21 (Phenotypically normal carrier)
Early meiosis in a "carrier." Same as No. 2 above.

Fig. 4. Familial mongolism is often due to chromosomal translocation of part of chromosome-21 to chromosome-12. Segregation of chromosomes during germ cell production is shown here accounting for the high frequency of mongoloid children of "carrier" mothers.

It is well known that there is an increased incidence of leukemia in Mongoloid children. In general, cytogenetic findings in tumors have been extremely variable—some tumors entirely normal, some with triploid and tetraploid cells. Certain forms of leukemia, however, have a relatively constant abnormal chromosome called the Philadelphia (Ph^1) chromosome which may represent a fragment of chromosome-21, produced either by deletion or translocation of part of the long arms.[11] It is postulated that a leukopoietic locus exists on chromosome-21, the duplication of which (trisomy) produces acute leukemia and the deletion of which (Ph^1 chromosome) produces chronic myelogenous leukemia.[8]

Klinefelter's Syndrome.—Also relatively common, Klinefelter's syndrome is associated with a 44 normal autosomes (non-sex chromosome) but an XXY sex chromosome distribution. The patients have small testes, aspermia, as well as a host of other features such as gynecomastia and long limbs. The extra X chromosome is apparently partially "inactivated"[4, 5] and appears on the nuclear membrane in buccal smears, producing a chromatin positive (female) pattern.

Turner's Syndrome.—Women with ovarian dysgenesis, short stature and associated anomalies fit clinically into the Turner's syndrome. Other findings frequently include "webbed" neck, genital infantilism, occasional coarctation of the aorta and scanty pubic and axillary hair.[9] The buccal smear is chromatin negative, compatible with the cytogenetic findings of 44A-XO.[10] Just as it is unclear how a chromosomal trisomy with its triple dose of genes is expressed as an anomaly, the mechanism by which chromosomal monosomy affects the individual is not known. It is possible that the absence of a second X chromosome allows all the recessive genes present on the remaining X to be expressed. Mosaicism is relatively common in the Turner's syndrome (20 per cent) (figure 5).

Triple-X.—The XXX pattern is associated with a doubly positive buccal smear, but a variety of phenotypes are seen.[12] These women are often apparently normal, but a somewhat higher incidence of mental retardation is reported. Although sterility and amenorrhea are occasionally present, they are by no means constant. The syndrome is not exceptionally common, the incidence estimated at about 1:1000.

Group D-Trisomy.—A number of cases of trisomy of one of the members of Group D (13, 14 or 15) have been seen in this hospital and others. Since it is difficult to distinguish one chromosome from another in this group, no attempt is made to number the chromosomes involved. These children are often grossly malformed and their prognosis is poor.[13] The incidence is low, and the sex ratio favors females slightly. The primary feature of the syndrome is maldevelopment of the central nervous system and associated structures. In addition to faulty develop-

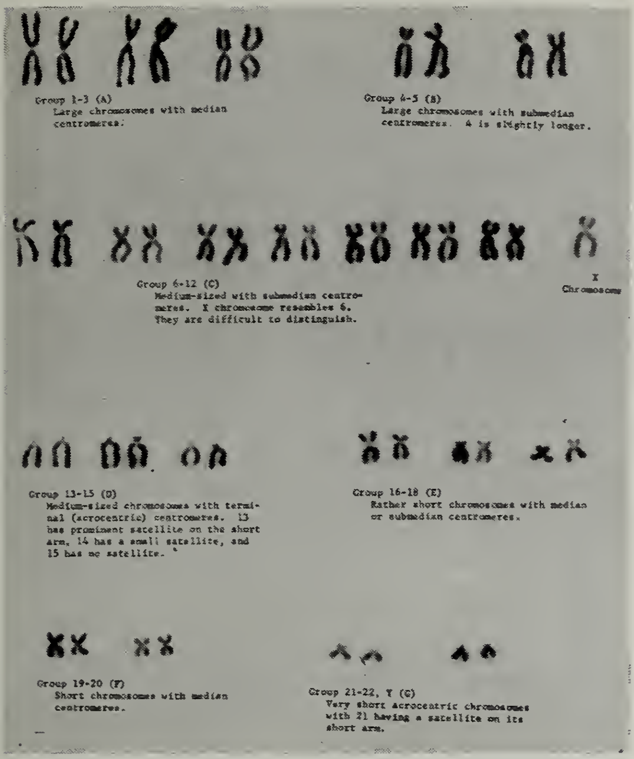
Group 1-3 (A)
Large chromosomes with median centromeres.
Group 4-5 (B)
Large chromosomes with submedian centromeres. 4 is slightly longer.
Group 6-12 (C)
Medium-sized with submedian centromeres. X chromosome resembles 6. They are difficult to distinguish.
X Chromosome
Group 13-15 (D)
Medium-sized chromosomes with terminal (acrocentric) centromeres. 13 has prominent satellite on the short arm, 14 has a small satellite, and 15 has no satellite.
Group 16-18 (E)
Rather short chromosomes with median or submedian centromeres.
Group 19-20 (F)
Short chromosomes with median centromeres.
Group 21-22, Y (G)
Very short acrocentric chromosomes with 21 having a satellite on its short arm.

Fig. 5. Turner's syndrome is associated with the XO karyotype seen here. The normal female has two X-chromosomes.

ment of the cortex and cranial vault, the olfactory tracts, the eyes and the auditory apparatus, defects of heart, gastrointestinal tract, and genito-urinary system are common. Myoclonic seizures and apneic episodes are often present also.[13, 14]

Group E-Trisomy.—Cases of trisomy of a chromosome in the 16, 17 and 18 group are associated with hypertonic musculature, VSD, horseshoe kidney, mental retardation and malformed ears. In addition, a peculiar clinching of the fingers with the first tending to overlie the third is often seen. Again the prognosis is poor. Seventy-one per cent of the affected children are females, suggesting that *in utero* selection against males may be present. In this syndrome as well as in the Group D-trisomy, buccal smears are normal.[13, 14]

SUMMARY

Chromosome defects are much more frequent than previously supposed. Laboratory technics are outlined and the suggested etiologies and mechanisms are reviewed. Mongolism, Turner's and Klinefelter's syndromes, Triple-X, D-trisomy and E-trisomy are briefly described. Laboratory investigation of these and other defects is now possible and the results are often important in determining prognosis and treatment as well as in genetic counselling.

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Clinical Experience With Gastric Hypothermia in the Treatment of Upper Gastrointestinal Hemorrhage

In 1958, Wangensteen and associates[1] demonstrated that lowering the temperature of the stomach resulted in a reduction in gastric secretion and a marked inhibition of peptic digestion. They suggested that local gastric cooling could be used therapeutically in the treatment of upper gastrointestinal bleeding, and reported on its use in five patients. More recently, blood flow measurements[2, 3] have shown that gastric hypothermia brings about striking reduction in blood flow to the stomach and, in addition, a reduction in blood flow through the hepatic artery, superior mesenteric artery and portal vein. This effect on blood flow to the upper abdominal viscera is likely more important in achieving control of upper gastrointestinal tract hemorrhage than is the reduction in the secretion of acid and pepsin by the stomach.

Recent experience with localized gastric hypothermia in the treatment of 15 patients with upper gastrointestinal hemorrhage is reviewed. Control of bleeding was achieved in the majority of these patients soon after the initiation of gastric cooling, and emergency surgery was necessary in only a few cases. It is believed that this technic, when used with proper care and awareness of potential hazards, is deserving of further clinical trial.

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Numerous recent reports of experience with gastric hypothermia have appeared in the literature,[4–11] and most authors are in agreement that the technic is useful in controlling hemorrhage in certain instances. Permanent control of bleeding has been achieved in the vast majority of patients with duodenal ulcer, but control has not been achieved so uniformly in patients with bleeding gastric ulcer. The success of gastric hypothermia in the treatment of bleeding from other conditions such as hemorrhagic gastritis, stress ulcer, blood dyscrasias, steroid ulcer, postoperative bleeding and neoplasm has been variable. Although localized cooling has controlled bleeding from esophageal varices in a high proportion of cases, there is still some question as to whether over-all mortality rates in this most grave condition have been lowered appreciably by its use.

From September 1, 1962, to June 30, 1963, we have used gastric hypothermia in attempting to control upper gastrointestinal bleeding in 15 patients, and it is our experience with these patients which forms the basis for this report. A commercially available gastric hypothermia unit* which circulates a coolant solution was used, and the technic was essentially that described by Nicoloff, et al.[7] After passing a Levin tube and an Ewald tube into the stomach, cold saline was infused through the Levin tube, and the Ewald tube was aspirated until the return was clear. The vomiting which often accompanied passage of the Ewald tube sometimes proved more efficacious in emptying the stomach of large clots than did the irrigation. The Ewald tube was removed and the Levin tube allowed to remain in place for aspiration during gastric cooling. After the pharynx was sprayed with a topical anesthetic agent, the lubricated gastric balloon attached to the double lumen plastic tubing was passed into the stomach. The balloon was slowly inflated with from 200 to 250 cc. of fluid and, with gentle traction on the tubing, the upper end of the balloon was seated in the cardia. The balloon was then further inflated until the patient noted a feeling of fullness (from

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* Swenko Gastric Hypothermia Machine.

600 to 1100 cc.), at which point circulation of the coolant solution was begun and the volume within the balloon was maintained at a constant level. Inflow temperatures of 5 to 10 C. were utilized and cooling was continued for at least 18 hours after cessation of hemorrhage. A warming blanket was used to avoid marked lowering of body temperature and a thermistor probe was placed in the rectum in order to monitor body temperature. Since gastric secretion rapidly returns to normal or above normal levels after cessation of cooling,[2] a continuous drip of skim milk was instituted via the Levin tube as soon as the gastric balloon had been removed. If tube feeding was deemed potentially hazardous because of paralytic ileus or extreme debility of the patient, nasogastric suction was instituted and continued until a milk drip could be tolerated.

Although some of the patients in our series had persistent bleeding despite attempts at medical management and were not good candidates for surgery, others were subjected to gastric hypothermia without a trial on conventional management. This was particularly true as we gained more experience with the technic. A high degree of success in treating the first few patients led us to the conclusion that gastric hypothermia was more likely to result in prompt slowing or cessation of hemorrhage than was any other nonoperative approach and, consequently, many patients were treated by this technic without waiting for a trial on other medical management. We feel strongly that those patients who ultimately require surgery for definitive management of the lesion responsible for hemorrhage will have a lower morbidity and mortality if bleeding can be controlled by nonoperative means, allowing time for proper evaluation and preparation of the patient for elective surgery. In those patients who are bleeding as the result of disease processes which are completely reversible by time and medical therapy, operation can be avoided completely if the hemorrhage can be stemmed.

CLINICAL EXPERIENCE

Duodenal Ulcer

J. F. was a 65 year old white male with a history of hematemesis and melena of several hours duration. Hematocrit on admission was 28 per cent. After typing and cross-matching, transfusions were started and gastric hypothermia was instituted. During the next 18 hours, the patient required 12 units of blood to maintain the hematocrit at from 30 to 32 per cent. In the face of continued bleeding, he was taken to the operating room where exploration revealed a prepyloric ulcer, an ulcer in the duodenal bulb and a third ulcer in the second portion of the duodenum. Suture ligature of the ulcers and vagotomy-pyloroplasty were carried out. Recovery was uneventful.

K. M. was a 72 year old white male with a history of previously demonstrated duodenal ulcer who had been having tarry stools for two weeks. Shortly after admission, he had massive hematemesis, became hypotensive and suffered a cerebrovascular accident which left him comatose and hemiplegic. Bleeding continued and gastric cooling was begun with prompt control of hemorrhage and stabilization of vital signs. Hypothermia was discontinued after 36 hours and there was no further bleeding. The patient never regained consciousness, however, and developed bilateral pneumonia. He went progressively downhill and died six days after admission. Autopsy was not obtained.

Comment: Failure to control the first patient may have been due to the fact that one of the ulcers was more distal in the duodenum than usual and blood flow to this area is probably not reduced appreciably by gastric cooling. Peter, et al.[3] have shown a reduction of 58 per cent in blood flow to the stomach and 51.6 per cent in blood flow through the hepatic artery, but only a 23 per cent reduction in blood flow through the superior mesenteric artery. Although the ultimate fatal outcome in the second patient vitiates the success of the treatment for bleeding, prompt control of hemorrhage by means of gastric hypothermia was striking.

Gastric Ulcer

F. H. was a 41 year old white female who had had hematemesis and melena during the previous two days and had received four blood transfusions. On admission to the University of Missouri Medical Center, the hematocrit was 15 per cent. A continuous drip of skim milk was started and she was given six more units of blood during the next 24 hours. She then developed massive hematemesis and gastric hypothermia was begun. Eighteen units of blood were given during the next eight hours and the hemorrhage finally ceased. Several days later an upper gastrointestinal series was nondiagnostic. On the eighth hospital day, she had another massive hemorrhage and was taken to the operating room. Exploratory laparotomy revealed a bleeding gastric ulcer and a subtotal gastrectomy was carried out. The postoperative course was complicated by pulmonary embolus, but the patient had no further difficulty after this episode and was discharged on the twelfth postoperative day.

E. A. J. was a 60 year old white male who was transferred to the University of Missouri Medical Center with a three day history of upper gastrointestinal bleeding manifested by hematemesis and melena. Blood loss had continued after administration of six pints of blood. On admission to the University of Missouri Medical Center, the patient was in shock with a pulse of 130 and blood pressure of 80/50. Approximately 1,500 cc. of bright red blood and clots were aspirated from the stomach with an Ewald tube. Following the rapid administration of 1,500 cc. of blood, the blood pressure was 120/70, but there was a continuous flow of bright red blood from the Levin tube. Accordingly, gastric hypothermia was started approximately one and one half hours after admission. The passage of the tube and balloon was accompanied by a sudden worsening of the patient's general condition. There was a rapid development of cyanosis accompanied by the production of frothy, bloody sputum, and aspiration of blood into the air passages was believed to have occurred. Despite resuscitative efforts in the form of whole blood, endotracheal intubation and, finally, closed chest cardiac massage, the patient deteriorated rapidly and died three hours after admission. Autopsy revealed a 4 cm. greater curvature gastric ulcer (benign). The heart, lungs and upper air passages were, essentially, within normal limits. The patient did not appear to have expired from tracheobronchial aspiration and obstruction.

Comment: Gastric cooling accomplished little in these two patients with bleeding gastric ulcers and it is possible that it may have contributed to the death of the second patient. F. H. was the first patient on whom we used the gastric hypothermia machine and, because of our inexperience, we persisted in the use of gastric cooling for what we now consider to be an inordinate period of time in the face of continued heavy bleeding. We were fortunate in not encountering serious difficulty from the administration of large quantities of blood during such a short period of time. Although temporary control of bleeding was ultimately achieved by gastric cooling, the patient bled a second time and underwent emergency gastrectomy.

The sudden worsening of the second patient's condition coincident with the passage of the tube and balloon was initially believed to be the result of injury from passage of the tube. Autopsy failed to bear this out and it was concluded that the patient died of the effects of continued blood loss and shock. It is possible that the stomach was not completely emptied of blood and clots before institution of gastric hypothermia.

Postoperative Hemorrhage

S. C. was a 67 year old white female who underwent a cholecystectomy and choledochostomy with removal of common duct stones. She had a pulmonary embolus on the fourth postoperative day and again on the sixth postoperative day. Transient improvement followed vena cava ligation, but on the 10th postoperative day she vomited coffee ground material and the hematocrit began to decline. She continued to have occasional coffee ground emesis during the next few days and then began vomiting bright red blood. Gastric hypothermia was instituted with prompt control of bleeding and there were no further episodes of hemorrhage. However, she went on to develop acute pancreatitis, wound dehiscence, pneumonitis and staphylococcal enteritis and expired.

E. M. was an 82 year old white female who underwent operative closure of a perforated duodenal ulcer. Her postoperative course was complicated by gastric retention, and, on the seventh postoperative day, she developed massive hematemesis and went into shock. Blood transfusions were started and gastric hypothermia was begun with rapid improvement in vital signs and cessation of hemorrhage. She had no further episodes of bleeding. A temporary feeding jejunostomy was performed because of persistent pyloric obstruction, and, after a few days on tube feedings gastric emptying returned to normal. She was then placed on oral feedings and the remainder of her course was uneventful.

W. G. was a 59 year old Negro male who was admitted in shock with an acute abdomen. The blood pressure stabilized at normal levels after treatment with blood, plasma and intravenous fluids. After exploratory laparotomy revealed a perforated duodenal ulcer with severe purulent peritonitis, simple closure of the perforation was carried out. He had a stormy postoperative course with high spiking fever and prolonged paralytic ileus. Several bouts of moderate hematemesis seemed to respond to conservative measures, but, on the 13th postoperative day, he developed massive hematemesis requiring four units of blood during a six hour period. Gastric hypothermia was begun and there was no further evidence of fresh bleeding. He continued to have a stormy course during the next week, but had no further gastrointestinal bleeding. He gradually improved and was discharged on the 52nd postoperative day.

Comment: All three of these patients were critically ill when bleeding was first noted. It was our feeling that operative intervention to control hemorrhage, had it been necessary, would almost certainly have been fatal in each instance. Gastric hypothermia controlled the bleeding in each patient and we believe that it was life-saving in the two patients who survived.

Stress Ulcers

C. R. was an 82 year old white female who sustained a 20 per cent body burn and was admitted two weeks post-burn for debridement and skin grafting. On the 35th post-burn day she developed melena and a decline in the hematocrit. After a brief unsuccessful trial on a medical regimen, gastric cooling was started with prompt stabilization of the hematocrit. Although there was no further evidence of bleeding, the patient developed pneumonitis and signs of generalized sepsis and expired on the 46th post-burn day. Autopsy revealed a healing acute ulcer in the second portion of the duodenum.

C. D. was a 29 year old white male who was found unconscious along a highway. Evaluation revealed a quadriplegia resulting from fracture of the spine at the c-6 level as well as a head injury. During the next few days the sensorium began to clear and the patient was begun on oral intake. On the seventh hospital day the hematocrit was noted to be 19 per cent and he developed gross melena. During the next 48 hours he required 14 units of blood and continued to pass tarry stools. Gastric hypothermia was instituted with prompt slowing and eventual cessation of bleeding. He underwent cervical spinal fusion on the 20th hospital day and the remainder of his course was uncomplicated.

Comment: Although stress ulcer was not proven in the second patient, it would seem to be the most likely cause of hemorrhage in such a person with marked trauma to the central nervous system. The permanent control of bleeding by gastric cooling in both of these patients was extremely gratifying because of the expected high mortality from this complication in the severely injured patient. Unfortunately, the burn patient lived only 11 days after the bleeding episode and it can not be said with certainty that further episodes of bleeding from the "Curlings" ulcer would not have occurred had she lived longer. However, on the basis of this experience, we feel that gastric hypothermia certainly merits a thorough trial when this almost uniformly fatal complication appears in a severely burned patient.

Unknown Source of Bleeding

M. M. was a 43 year old white female who had an episode of vomiting followed shortly afterward by hematemesis and melena. She received eight units of blood at another hospital during a 12 hour period and continued to bleed massively. On admission to the University of Missouri Medical Center, gastric hypothermia was begun and there seemed to be prompt slowing of the hemorrhage. However, at the end of six hours a rise in the pulse rate and decline in the blood pressure were noted along with evidence of fresh bleeding. The patient was taken to the operating room where careful exploration of the stomach and the first portion of the duodenum revealed no active bleeding. There were a few superficial erosions in the distal stomach and a linear furrow covered with exudate in the mucosa of the cardia. Because of uncertainty as to the site of bleeding, the furrow in the cardia was oversewn and a subtotal gastrectomy was carried out. Recovery was rapid and uneventful.

F. T. was a 62 year old white male who had been hospitalized elsewhere for pneumonia and developed melena in the hospital. Eleven units of blood were given over a nine day period and he then developed massive hematemesis requiring 15 units of blood in approximately 18 hours. On admission to the University of Missouri Medical Center, gastric cooling was instituted and, during the next 28 hours, four units of blood brought the hematocrit from 23 per cent to 36 per cent. Marked hemorrhage then recurred and laparotomy was carried out. No active bleeding was seen in the stomach or duodenum but several superficial ulcerations were visible in the cardiac portion of the stomach. These were oversewn and vagotomy-pyloroplasty was done. After a difficult postoperative course complicated by continued pneumonitis and wound dehiscence, the patient recovered and was discharged.

Comment: Although gastric cooling did not result in permanent control of hemorrhage in either of these two patients, it did bring about a marked decrease in the rate of bleeding or temporary cessation of bleeding. Both patients represented difficult problems in surgical judgement since the source of bleeding could not be identified with certainty. The first patient could well have represented the "Mallory-Weiss" syndrome, but the presence of erosions in the distal stomach led us to carry out gastric resection. Vagotomy was done in the second patient because the erosions were high in the stomach and because we wished to do a procedure less formidable than gastrectomy in this seriously ill patient. The presence of superficial erosions in both patients raised the question of whether or not these lesions may have resulted from trauma from the gastric balloon or mucosal damage from the gastric cooling. We have noted no similar lesions in our other two patients who underwent surgery following gastric hypothermia, nor have such lesions been reported by others.

Miscellaneous

J. U. was a 51 year old white male with steatorrhea thought to be secondary to post-gastrectomy "blind loop syndrome." He experienced massive upper gastrointestinal bleeding which was promptly controlled by gastric hypothermia. The prothrombin time was found to be markedly prolonged and, after Vitamin K therapy had brought the prothrombin time to normal, gastric cooling was discontinued with no further evidence of bleeding.

C. W. was a 53 year old white male who had a massive upper gastrointestinal hemorrhage three months after a Billroth I gastrectomy for bleeding gastric ulcer. Bleeding ceased rapidly after gastric cooling was begun and there was no further hemorrhage. Upper gastrointestinal x-ray revealed a marginal ulcer in the duodenum, and, after an unsuccessful trial on medical management for two months, he underwent bilateral vagotomy.

W. T. was a 74 year old white male who had abdominal exploration for what proved to be a nonresectable abdominal aortic aneurysm. His postoperative course was complicated by staphylococcal pneumonia and, on the 17th postoperative day, he developed massive upper gastrointestinal hemorrhage. This was promptly controlled by gastric hypothermia, but attempts at discontinuation of gastric cooling led to further bleeding. His course was progressively downhill and autopsy revealed multiple erosions of esophagus, stomach and duodenum. Monilia was cultured from this area.

T. H. was a 71 year old white male who had had melena for two weeks. Evaluation revealed congestive heart failure, pneumonitis and blood in the stomach aspirate. Upper gastrointestinal x-rays were not diagnostic. Medical management failed to control the hemorrhage but it was controlled successfully by gastric hypothermia on two separate occasions. However, his congestive failure proved to be intractable and he expired as a result of pneumonitis and pulmonary edema. Autopsy revealed an ulcerated carcinoma of the stomach.

Comment: Although the control of bleeding due to a defect in the clotting mechanism has not been uniformly successful in the hands of others, it proved helpful to us in the case of bleeding due to prothrombin deficiency and would seem deserving of further trial as a temporary measure in the patient with a correctable clotting defect. The prompt cessation of hemorrhage in the patient with stomal ulcer was gratifying, and, although he ultimately required surgery for control of the peptic ulcer diathesis, an emergency procedure in a massively bleeding individual was avoided. The remaining two patients provide examples of the efficacy of gastric hypothermia, but the etiology of the bleeding was such that permanent control could not be expected. We would not advocate the use of gastric hypothermia in the patient who is bleeding from a known gastric neoplasm except perhaps for temporary control of bleeding until definitive resection could be carried out.

Discussion

Table 1 summarizes the results in these 15 patients. It can be seen that control of hemorrhage was achieved by gastric hypothermia in nine patients and bleeding was temporarily controlled in an additional two patients. Although generalization is not possible on the basis of experience with such a small group of patients, we feel that this technic was particularly useful, and in some cases life-saving, in the patients with postoperative hemorrhage and those with stress ulceration.

The question of selection of patients for gastric hypothermia is one that can only be answered after much more extensive use of this technic in large numbers of patients. Our results have been sufficiently encouraging so that we feel that gastric hypothermia deserves further trial in all patients who are bleeding massively from the upper gastrointestinal tract and should be used without prior attempts at conventional medical management in this type of patient. We

TABLE 1

SUMMARY OF PATIENTS TREATED BY MEANS OF GASTRIC HYPOTHERMIA

Patient	*Cause of Bleeding*	*Bleeding Controlled by Hypothermia*	*Operation for Control of Hemorrhage*	*Death*
J.F.	Duodenal ulcer	No	Yes	
K.M.	Duodenal ulcer	Yes	No	Yes (other causes)
F.H.	Gastric ulcer	Temporarily	Yes	
E.J.	Gastric ulcer	No	No	Yes
S.C.	Postoperative hemorrhage	Yes	No	Yes (other causes)
E.M.	Postoperative hemorrhage	Yes	No	
W.G.	Postoperative hemorrhage	Yes	No	
C.R.	Stress ulcer	Yes	No	Yes (other causes)
C.B.	Stress ulcer	Yes	No	
M.M.	Unknown	No	Yes	
F.T.	Unknown	No	Yes	
J.U.	Prolonged prothrombin time	Yes	No	
C.W.	Stomal ulcer (duodenal)	Yes	No	
W.T.	Moniliasis	Temporarily	No	Yes
C.H.	Gastric carcinoma	Yes	No	Yes (other causes)

also feel that gastric cooling is indicated in the patient who is bleeding at a slower rate but who fails to respond to medical management. In the patient who continues to require large volumes of blood for replacement after two to three hours of gastric cooling, prompt surgical intervention would seem indicated, for the hazards of continued massive transfusion with banked blood begin to outweigh the risk of surgery.

We have had no serious complications directly attributable to gastric hypothermia except that one patient (E. J.) died early in the course of gastric cooling and it cannot be ascertained with certainty that the institution of gastric cooling was not related to this sudden death. It is possible that gastric hypothermia may have contributed to the development of pneumonia in several of our patients, but these were patients who were seriously ill with debilitating disease and who might be expected to develop pulmonary complication because of the nature of their disease. At any rate, meticulous care of tracheobronchial secretions is important in any patient with an indwelling gastric tube, particularly a tube of large caliber such as that used with the gastric hypothermia machine. We now feel that any patient who manifests difficulty in handling secretions while undergoing gastric cooling should have a prophylactic tracheostomy performed so that frequent suctioning of the trachea and bronchi can be carried out with ease and efficiency.

Careful attention to detail is necessary if hazards are to be avoided and success achieved. Gastric rupture has been reported by others,[6, 7, 8, 11] and may result from inflating the balloon in a stomach not properly emptied of blood clots or from the accumulation of air in the machine displacing more and more fluid into the balloon. The latter mechanism has been obviated by a safety device incorporated in the machine which warns of the presence of air. It is essential that trained personnel be with the patient constantly to monitor factors such as volume of fluid in the balloon, temperature of the coolant solution and body temperature of the patient, and a physician familiar with the patient and with the technic of gastric hypothermia must be readily available. Catastrophe was narrowly averted in one of our patients when it was discovered that the inflow temperature of the circulating alcohol had drifted down to –20 C. Apparently this temperature had not been maintained for a long enough time to produce necrosis of the stomach wall.

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A Proper Reference

Special Article

First, let me congratulate all who have made it possible for this precommencement ceremony to occur, those who have contributed to the founding of this impressive medical center, those who are responsible for its day-by-day function, those who have made it possible for these seniors to graduate today. Seniors, let me congratulate you on your presence here. This, in itself, is recognition of accomplishments of great significance.

A little more than ten years ago, I stood on Frenchman Flats about 70 miles from Las Vegas with other members of the Armed Forces Special Weapons Project watching the detonation of a conventional atomic bomb. We were 10 miles from the bomb on a hill, and the day before I had been allowed to go to the top of the tower, 300 feet high, which held the bomb. This distance was chosen because the periphery of the fireball itself would just touch the ground after explosion of a 30-plus kiloton atomic bomb. In the cold early dawn the fireball was followed rapidly by the mushroom cloud and I was aware that my whole visual field seemed to be filled by the explosion 10 miles away. A few years later when the first megaton hydrogen bomb was exploded in the Pacific, one of my friends explained its magnitude to me by saying that from a 100 mile distance, it was like looking at a 30 kiloton explosion from 10 miles away. He was able to use a reference which had a meaning to me.

All commencement speakers would like to say things that are meaningful to graduating seniors; yet all know the high probability that the really important things have already been said many times before—such things as those having to do with truth, the nature of man, with the goals of education, the goals of medicine and with other eternals. The best that can be done is to try to pick a reference that has a significance, an import, for the listeners. As an aside, one might remember that the best-selling book, or the books that become classics, do so because the reader finds special meaning in terms of his own experiences in what the author has written. The proper reference that I have chosen to emphasize today is the reference that you should have to yourself, to your profession, and to your society; and though I shall use many words, all that I shall say could be summarized in the phrase, "Know thyself."

This was presented as a Precommencement Address at the University of Missouri Medical Center, Columbia, on June 4, 1963.

Dr. Marston is Director and Dean of the University of Mississippi Medical Center, Jackson, Miss.

In choosing the profession of medicine, you are inevitably seeking goals which must be higher than the satisfaction of personal ambition. In medicine you will find many rewards, but I believe that those of you who remain sensitive and clear in your goals will know what William Faulkner meant in the first paragraph of his Nobel Prize acceptance speech, and I quote:

"I feel that this award was not made to me as a man, but to my work—a lifework in the agony and sweat of the human spirit, not for glory and least of all for profit, but to create out of the materials of the human spirit something which did not exist before; so this award is only mine in trust. It will not be difficult to find a dedication for the money part of it commensurate with the purpose and significance of its origin. But I would like to do the same with the acclaim too, by using this moment as a pinnacle from which I might be listened to by the young men and women already dedicated to the same anguish and travail, among whom is already that one who will someday stand here where I am standing."

Faulkner's subjects were the deepest known to man—hate, lust, despair, injustice, love and friendship. The very nature of medicine means that you will contact every deep and meaningful experience that mankind knows, and your livelihood, in a sense, will come from the pain and suffering of your fellow man. If from this circumstance you seek fame, fortune and esteem alone, then you will become the most pitiable of men, in truth, parasites on society. Your responsibilities go beyond the saving of lives, the prolongation of life, the alleviation of suffering, and include attempts to increase the meaningfulness, the effectiveness and the enjoyment of the lives of your fellow man.

In psychiatry, you have been taught that you must substitute your own reactions for the ruler, the balance, the radio-isotope counter and other objective measuring devices, as a standard against which you measure your patient's health. An inaccurate ruler can only result in an inaccurate measurement, and thus an inaccurate conclusion. You know, too, by this time that this example is not limited to psychiatry. Through the years, you have been advised to treat your patients as if they were members of your own families. In a sense, this is medicine's own interpretation of the golden rule.

Those in medicine must keep their eyes relatively free of motes, not only to protect individual patients but for the welfare of the profession and of society.

So, let us leave the individual for a moment and consider Max Lerner's concept of why civilizations fail. In a December 1962 article in the *Saturday Review,* he sets forth the thesis that civilizations fail because of rigidity and various other factors, but most of all because they cease to know themselves and live with a distorted image of their world and of themselves. Individuals who truly lose contact with reality lose their effectiveness, lose their ability to enjoy life and are considered sick. Medicine must keep its goals clear and be sure they are properly related to the broader goals of society.

Few professions require that the individual have as clear and honest a concept of himself as does medicine. To realize this objectivity, you have been in a position to study the depths of the human soul as can no other, not casually or curiously, but within the framework of the most highly developed system of science that the world has ever known.

I am interested in viruses. The developments in this field in the last fifteen years remind one dramatically that the useful life of technical information has become much shorter than the professional life of the individual. Most of what you learn and use in your lifetime will be learned after you leave medical school. How many of you, for instance, are prepared for the changes which discoveries in virology will have on the practice of medicine, or for the stimulus that these discoveries have had on related fields, such as genetics? Consider these examples of what has occurred during your brief scientific career: the extraction of the nucleic acid of purified viruses and the use of this chemical to infect cells; the discovery of the process whereby ribonucleic acid acts as a messenger for the activation of chemical reactions; the demonstration of synthesis not only of proteins but of artificial proteins from artificial ribonucleic acids; the demonstration of abnormalities in human chromosomes which correlate well not only with specific human disease but with specific biochemical impairments actually causing the disease, and in some instances the application of knowledge gained from such discoveries to the prevention of the ill effects of the disease if not of the disease itself. Each of you could choose other examples, such as the recent synthesis of biologically active desoxyribonucleic acids.

To maintain a proper reference, a proper understanding of ourselves and of our field, we will need some mechanism to keep informed of and to participate in the scientific advances in the field of biology, occurring at such a rate that it has been suggested we are in the midst of an explosion or revolution not unlike that which physics has recently experienced.

To attain a proper perspective towards one's own field, one will have to look outside from time to time. For instance, a new book entitled "'Animal Species and Evolution"[1] by Ernst Mayr is, according to Sir Julian Huxley, indispensable for everyone interested in evolutionary biology. Some of Mayr's comments are particularly pertinent to us. He says: "The theory of evolution is quite rightly called the greatest unifying theory in biology. The diversity of organisms, similarities and differences between kinds of organisms, patterns of distribution and behavior, adaptation and interaction, all this was merely a bewildering chaos of facts until given meaning by the evolutionary theory. There is no area in biology in which that theory has not served as an ordering principle."[2] And he adds:

"But much as we know about the 'how' of human evolution, the 'why' is still a great puzzle. High intelligence and harmonious social integration are undoubtedly attributes of high selective value, so much so, indeed that we may ask with Etkin (1954) 'why all animals are not as intelligent as Einstein and as moral as Albert Schweitzer?'[3] . . . 'Ethical' qualities, in a social organism, are apt to be important components of fitness. . . ."[4]

Mayr makes the interesting observation that there has been no increase in brain size since the time of the Neanderthal man nearly a hundred thousand years ago, and no real evidence of improvement of the brain without an enlarge-

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1. Mayr, Ernst, Animal Species and Evolution, Belknap Press of Harvard University Press, Cambridge, Mass., 1963.
2. Ibid., p. 1.
3. Ibid., p. 650.
4. Ibid., p. 651.

ment of the cranial cavity, although this is, of course, always possible.

And finally, in commenting on the threat to man's highest attributes posed by the problem of overpopulation, Mayr concludes by saying: "Let us hope that the biological aspects of man's evolution are duly taken into consideration by those entrusted with the task of planning for the future of mankind."[5]

You as physicians will be involved in this planning and in so doing you will need to appreciate and work with evolutionary biologists and representatives from many other disciplines. Unfortunately it appears at times that we have enough difficulty just working with ourselves. There is concern that various schisms within medicine are reducing our effectiveness. Your Dean, with others, gave excellent leadership to an Association of American Medical Colleges Institute held last fall to develop constructive efforts to resolve some of the town-gown problems. Our goal is not to avoid controversy or differences of opinion but to approach these divisive problems neither selfishly nor defensively but from the common goal of seeking the delivery of better health services.

I trust that no one in this audience will fail in the early years of this Medical Center to appreciate the tremendous importance of such centers to future life in this state and nation. Two years ago, I went as Dean to a center established about the same time. All of my previous experience had been in educational institutions established a minimum of 100 or so years ago and, indeed, with one established in 1237. During the last two years, I have developed a tremendous respect and admiration for those in Mississippi and Missouri, in Kentucky, in West Virginia, in Washington state and elsewhere in this nation, who struck out to develop educational institions which are the most expensive, the most complicated, the most highly competitive in terms of talent. From the moment some eight years ago that you became a four-year medical school and developed the Medical Center, the only acceptable reference for comparison has been the best in medical education in the country. You who are graduating do so with the recognition that you leave this center with no limitations whatsoever so far as your education in the health fields is concerned.

When one graduates for the second or third time, some degree of nonchalance might be expected. Yet such is the nature of the M.D. degree that there is no possibility your achievements will pass without appropriate serious notice. I salute each of you and wish you each Godspeed.

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[5] Ibid., p. 662.

IRRADIATION

(Continued from page 287)

in some cases; in other cases it may tip the balance toward healing so that medical management can succeed; in some cases, the patient's condition may improve so that he is a better candidate for surgery.

Summary

1. Irradiation can benefit many patients with peptic disease who have failed to be controlled by other forms of treatment.

2. This type of irradiation (especially with supervoltage) is conservative treatment.

3. There is evidence to suggest that use of irradiation might save a considerable proportion of these patients (whose disease is not controlled by a medical regimen) the necessity of being subjected to surgery.

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Research in the Service of Medicine SEARLE

Leonard T. Furlow, M.D.

President's Message

One of the first responsibilities of a newly installed President of the Missouri State Medical Association is the appointment of members of committees. This was done at the 106th Annual Session.

At this session, as at all sessions, it is quite obvious that the committees play an extremely important part in the affairs of the Association. At the Annual Session the House of Delegates receives reports from the committees and bases its actions on these reports. During the year when the Council acts as the executive body, it depends on the studies and reports of the various committees and often delays actions until it has received the advice of the committee.

Therefore I hope that all members appointed to committees will accept the responsibility of serving and will realize that they, as members of committees, serve a basic need in the activities of the Association. Officers, Councilors and staff are always ready to assist in committee work.

Leonard T. Furlow

EDITORIAL

THE BUNDLE OF STICKS

The well known fable of the man who could break the sticks separately but not as a bundle is becoming more and more pertinent to the field of medicine. To divide and conquer is one of the oldest military strategies. Unfortunately for health care there are many well intentioned but badly informed individuals who view the physician as a skilled health technician, but one who is incompetent in "social planning." It is true that the physician is increasingly dependent upon other disciplines to render complete health care. It is equally true that he alone has the variety of educational and clinical exposures needed to create the necessary perspective for the solution of the complex health problems of today's urban and rural populations.

It is a sad but inevitable fact that success often brings more trials than does failure. Medicine is in such a predicament. The intense dedication of the members of the profession in America was originally evidenced in the manner and basic principles upon which the AMA was founded in 1847. As a result of the concerns of organized medicine medical care improved, scientific endeavors became more productive and ancillary health personnel was added; in turn the American public became the recipients of the finest medical care which has ever existed. The public response, a natural one, was to find ways to give generous financial support to this valuable social resource through private and public sources. The resultant and rapid growth which was stimulated and in part directed by the support of the donors has placed medical education and research in a difficult position. On the one hand it cannot avoid moving briskly forward in the design of education and research methodology which will anticipate the needs of the future. On the other hand, forward movement in this area will be of no avail if educators cannot maintain adequate communication and rapport with the physicians of today who perforce were educated in the past. As the discovery of new information hurtles onward this becomes an ever greater dilemma. Recent actions of the House of Delegates of the AMA and some medical societies in other states clearly depict the urgency of the situation.

One simple fact remains. If the medical profession, as we know it, is to survive at all it will be because of internal cohesiveness. If it splinters and falls prey to the many avaricious groups who covet the support, both financial and moral, which medicine now enjoys, we will have only ourselves to blame.

The similarities of town and gown are far greater than the differences. Practitioners move easily into the role of full time teachers and the educators who are already giving patient care move quite as easily into private practice. Perhaps more of this should occur. It is essential that we base our every professional and social action upon the knowledge that the end point for educator and practicing physician alike is the same —to improve the health of society at large. Without schools there can be no educated profession, without the profession the school serves no useful purpose.

It is time that we awaken to the divisive forces which threaten our unity. Only by understanding each other, including our mutual concerns and challenges, can we preserve the heritage of centuries which has been entrusted in our keeping. We possess the necessary capabilities and more to resolve the problem which faces us; only the necessary motivation is lacking. This task of resolving the differences cannot be left to "someone else," it is the prime responsibility of each person who proudly bears the M.D. degree and wishes to pass his profession on to his successors a little better than he received it.

Vernon E. Wilson, M.D.

Ramblings of the Field Secretary

On Tuesday night, February 4, the Chariton-Macon-Monroe-Randolph County Medical Society promoted a project which may well be considered by other medical societies. A dinner meeting was set up for some 36 ambulance people representing 12 ambulance companies who serve the four counties in handling accident victims. This dinner meeting was held at the Woodland Hospital in Moberly. Following a bountiful dinner, a special program on "Emergency Medical Care for Ambulance Personnel" was presented by four members of the medical society.

Dr. Rowlette and Dr. J. Will Fleming demonstrated a plastic bag splint.

The audience was interested.

"Emergency Splinting of Fractures and Control of Hemorrhage" was discussed by A. P. Rowlette, M.D. of Moberly. He demonstrated the use of a plastic bag which is blown up to serve for splinting of fractures and control of hemorrhage. "Obstetrical Emergencies Outside the Hospital" were discussed by Robert H. Young, M.D. of Moberly. "External Cardiac Resuscitation" was explained and demonstrated by J. Will Fleming Jr., M.D. of Moberly. "Indications for Oxygen Therapy and Mouth to Mouth Breathing Technic" were explained and demonstrated by Thomas S. Fleming, M.D. of Moberly.

Members of the audience tried mouth to mouth breathing technic.

Drs. Young, Rowlette, J. Will Fleming and T. S. Fleming put on the program.

A plastic mannequin was effectively used in the demonstrations involving external cardiac resuscitation and mouth to mouth breathing technic. Each member of the audience, with the cooperation of the mannequin, experimented with the technic of mouth to mouth breathing. The ambulance personnel present expressed their appreciation of this practical program of useful

(Continued on page 308)

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News—Personal and Professional

Speaking on vocational training, Avery **P. Rowlette**, M.D., Moberly, addressed the Little Dixie Chapter of the American Business Women's Association at Moberly early in February.

The Central Neighbors Club at Hannibal had **James C. Steele Jr.**, M.D., Hannibal, as speaker at a meeting on February 3.

Principal speaker at a meeting of the St. Joseph Chapter of the Order of DeMolay February 10 was **John N. Martin**, M.D., St. Joseph.

Participating in a panel discussion at a meeting of the American College of Surgeons in Denver February 17 was **Ian M. Thompson**, M.D., Columbia.

Speaker at the January meeting of the Turner P.T.A., Hannibal, was **Henry** Sweets, M.D., Hannibal.

Recently appointed as consultant in alcoholism for the State Division of Mental Diseases is **Joseph B. Kendis**, M.D., St. Louis.

The fifteenth annual Dr. F. G. Thompson Sr. Lecture will be given on May 6 at the Thompson, Brumm & Knepper Clinic building, St. Joseph, by James C. White, M.D., Boston.

Speaking at the Triological Society meeting at the Mayo Clinic, Rochester, Minn., in late January **John S. Knight**, M.D., Kansas City, discussed "Laryngeal Stenosis: Method of Surgical Correction."

The St. Joseph Rotary Club had as speaker at its February 4 meeting **William H. Ames**, M.D., St. Joseph, who discussed "Profile of a Coronary."

At a meeting of the American Academy of Orthopedic Surgeons recently **Fred C. Reynolds**, M.D., St. Louis, was named president-elect.

Named "Boss of the Year" **Hugh E. Stephenson Jr.**, M.D., Columbia, received a trophy at a meeting of the Columbia American Business Women's Association.

WOMAN'S AUXILIARY

(Continued from page 270)

ERF with the sale of playing cards and sympathy cards. Greene has an annual project of aiding the Tuberculosis Society's yearly campaign. Perry, Cooper, Jefferson, Miller-Morgan-Moniteau, South Central, Ozarks and West Central counties worked through local groups and honored their men on Doctor's Day.

We'll hope the doctors see this article and beam with pride over the services their wives accomplish throughout the state.

RAMBLINGS OF THE FIELD SECRETARY

(Continued from page 304)

technics helpful to them in their responsibilities for emergency medical care.

At the conclusion of the formal program many questions were posed by the audience and the discussion continued far into the evening.

It is understood that the American College of Surgeons has been interested in promoting actual demonstrations of this nature but is apparently not constituted organizational wise to put on such programs as the county medical societies as demonstrated by the Chariton-Macon-Monroe-Randolph Society on February 4. It would seem that county medical societies seeking good sound really worthwhile public relations projects have an example here well worth their consideration.

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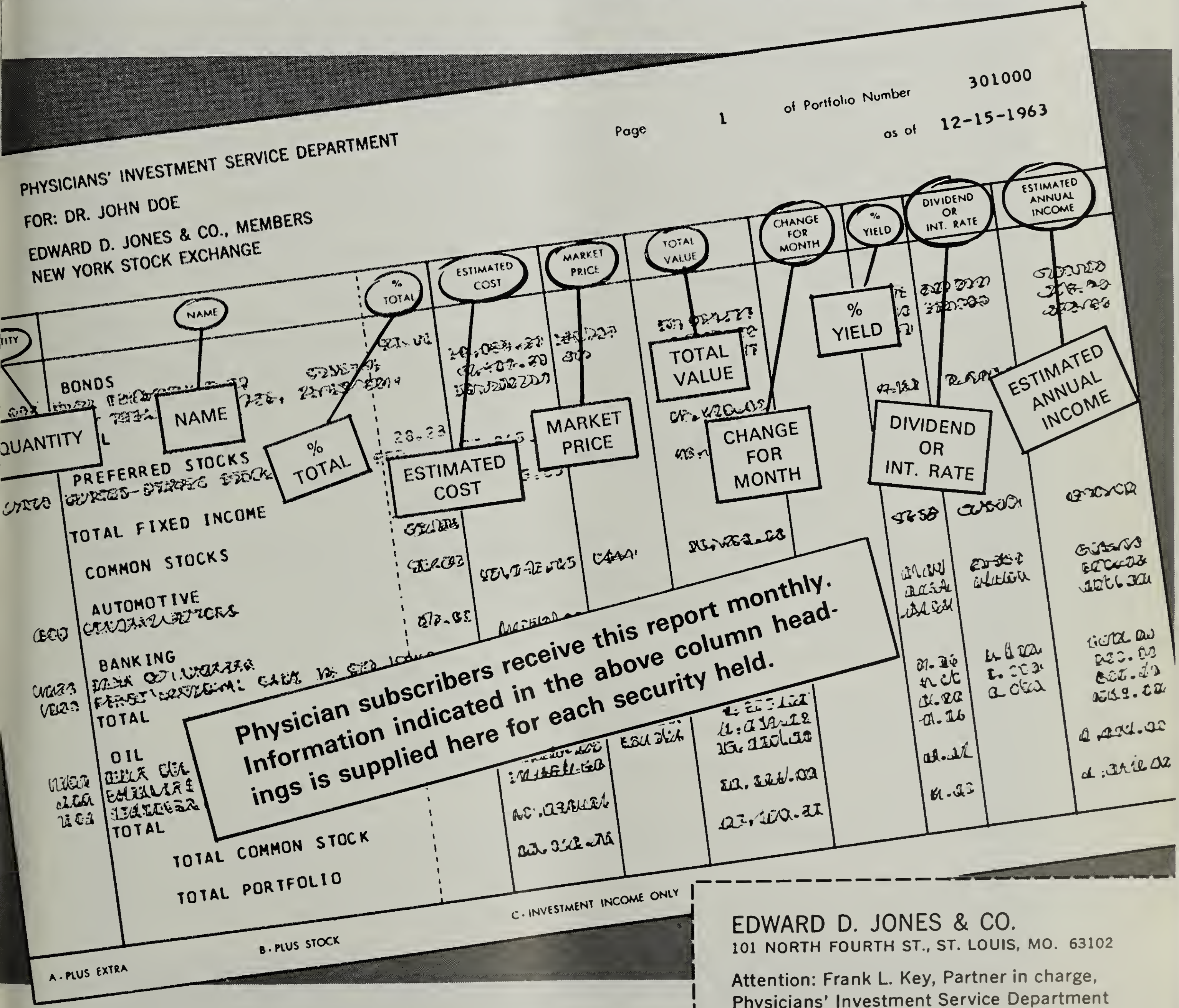

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New Members

A. Sherwood Baker, M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Baker is a native of Mount Morris, Ill., received his preliminary education at Cornell College, and his M.D. degree at the University of Illinois in 1942. He specializes in general practice.

J. W. Bernard, M.D., Doctors Clinic, Caruthersville, has become a member of Pemiscot County Medical Society. Dr. Bernard is a native of Memphis, Tenn., received his preliminary education at Southwestern at Memphis, and his M.D. degree at the University of Tennessee in 1959. He specializes in general practice.

Elwyn S. Brown, M.D., 1710 Independence Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Brown is a native of Belle Plaine, Iowa, received his preliminary education at State University of Iowa, and his M.D. degree at the University of Iowa in 1950. He specializes in anesthesia.

Edwin K. Burford Jr., M.D., 937 Broadway, Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Burford is a native of Doniphan, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at Washington University in 1958. He specializes in general practice.

John P. Crotty, M.D., 3244 January Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Crotty is a native of St. Louis, received his preliminary education at Notre Dame and St. Louis University, and his M.D. degree at St. Louis University in 1962.

Kenneth Dempsey, M.D., 2431 N. 49th St., Milwaukee, Wis., has become a member of St. Louis Medical Society. Dr. Dempsey is a native of St. Louis, received his preliminary education at St. Louis College of Pharmacy, and his M.D. degree at the University of Missouri in 1962.

George R. Gay, M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Gay is a native of St. Louis, received his preliminary education at Amherst College, and his M.D. degree at the University of Missouri in 1961. He specializes in anesthesia.

Hector F. Hoenig Jr., M.D., Bethany, has become a member of Grand River Medical Society. Dr. Hoenig is a native of Brainerd, Minn., received his preliminary education at St. John's College, and his M.D. degree at the University of N. Dakota in 1962. He specializes in general practice.

David S. Jacobs, M.D., 4949 Rockhill Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Jacobs is a native of Detroit, Mich., received his preliminary education at the University of Michigan, and his M.D. degree at the University of Michigan in 1956. He specializes in pathology.

Robert G. Laffoon, M.D., Illmo, has become a member of Cape Girardeau County Medical Society. Dr. Laffoon is a native of Union Star, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1960. He specializes in general practice.

Troy O. Morgan Jr., M.D., Albany, has become a member of Northwest Missouri Medical Society. Dr. Morgan is a native of Atlanta, Ga., received his preliminary education at the University of Oklahoma and his M.D. degree at the University of Oklahoma in 1956. He specializes in general practice.

Bernie Parsons, M.D., Albany, has become a member of Northwest Missouri Medical Society. Dr. Parsons is a native of Battiest, Okla., received his preliminary education at Oklahoma State University, and his M.D. degree at the University of Oklahoma in 1961. He specializes in general practice.

Donald B. Peterson, M.D., State Hospital No. 1, Fulton, has become a member of Callaway County Medical Society. Dr. Peterson is a native of Minneapolis, Minn., received his preliminary education at the University of Minnesota, and his M.D. degree at the University of Minnesota. He specializes in psychiatry.

L. A. Reeves, M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Reeves is a native of Leon,

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Iowa, received his preliminary education at Graceland College, and his M.D. degree at the University of Iowa in 1961. He specializes in obstetrics.

Roy C. Sloan, M.D., Marshall State School, Marshall, has become a member of Saline County Medical Society. Dr. Sloan is a native of Lingleville, Tex., received his preliminary education at Texas and Oklahoma Universities, and his M.D. degree at Baylor University in 1932. He specializes in psychiatry.

John E. Somers, M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Somers is a native of East Tawas, Mich., received his preliminary education at the University of Michigan, and his M.D. degree at the University of Michigan in 1957. He specializes in neurology.

Thomas C. Sparkman, M.D., 210 Christine St., Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Sparkman is a native of Poplar Bluff, received his preliminary education at Southeast Missouri State College, and his M.D. degree at Baylor University in 1962. He specializes in general practice.

James W. Terry Jr., M.D., 219 E. Pacific St., Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Terry is a native of St. Louis, received his preliminary education at Memphis State University, and his M.D. degree at the University of Tennessee in 1957. He specializes in urology.

Paul J. Wagner, M.D., 2826 Main St., Kansas City, has become a member of Jackson County Medical Society. Dr. Wagner is a native of Kansas City, Kan., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1960. He specializes in anesthesia.

Herbert D. Weintraub, M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Weintraub is a native of Cleveland, Ohio, received his preliminary education at Western Reserve University, and his M.D. degree at Western Reserve University in 1958. He specializes in radiology.

Thomas J. Williams, M.D., Osceola, has become a member of West Central Missouri Medical Society. Dr. Williams is a native of Oak Park, Ill., received his preliminary education at Kansas City University, and his M.D. degree at the University of Kansas in 1962. He specializes in general practice.

DEATHS

Riley, Ralph D., M.D., St. Louis, a graduate of Washington University, 1902; member of St. Louis Medical Society; aged 81; died January 2.

Biggs, James B., M.D., Bowling Green, a graduate of Washington University, 1913; member of Pike County Medical Society; aged 74; died January 25.

Blache, J. Owen, M.D., St. Louis, a graduate of Howard University, 1932; member of St. Louis Medical Society; aged 64; died February 4.

Tribble, Robert E., M.D., Chaffee, a graduate of the University of Missouri, 1953; member of Semo County Medical Society; aged 36; died February 5.

O'Brien, Leo A., M.D., Kansas City, a graduate of the University of Iowa, 1925; member of Jackson County Medical Society; aged 66; died February 10.

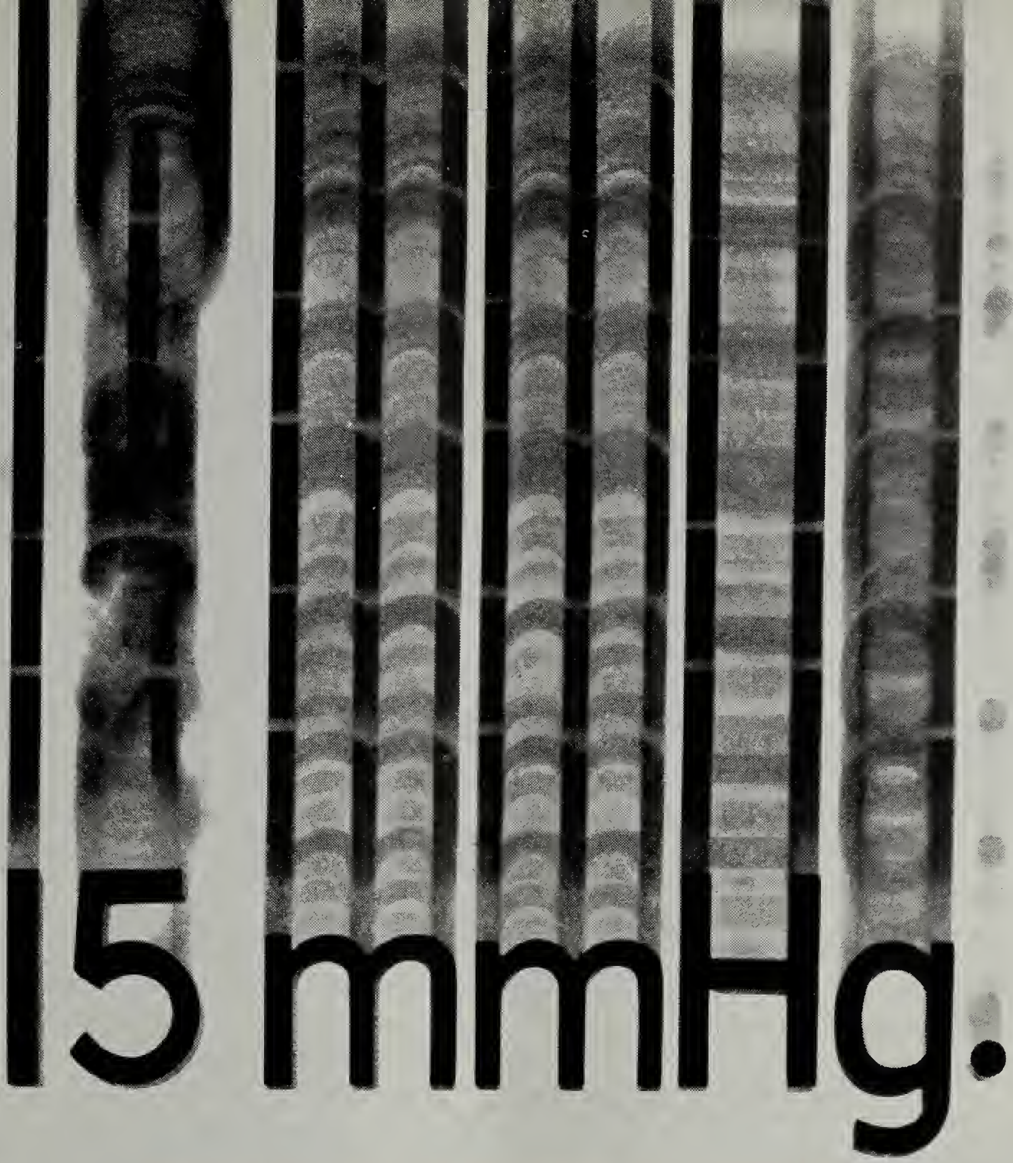
Greaves, Eli A., M.D., Kansas City, a graduate of the University Medical College of Kansas City, 1895; member of Jackson County Medical Society; aged 94; died February 15.

Koenig, George H., M.D., St. Petersburg, Fla., a graduate of St. Louis University, 1917; member of St. Louis Medical Society; aged 71; died February 16.

Spitzer, Ernest, M.D., St. Louis, a graduate of the University of Vienna, 1902; member of St. Louis County Medical Society; aged 88; died February 16.

Doubek, John C. Sr., M.D., St. Louis, a graduate of St. Louis University, 1921; member of St. Louis Medical Society; aged 75; died February 19.

Powell, Carl A., M.D., St. Louis, a graduate of St. Louis University, 1913; member of St. Louis Medical Society; aged 78; died February 22.



AVERAGE DIASTOLIC DROP*

*has been reported after use of HYDROMOX Quinethazone in recent studies of patients with various hypertensive diseases, including essential hypertension and hypertension associated with arteriosclerotic heart disease, obesity, and renal disease.[1,2] The treatment period in one study was eight weeks[1] and in the other, twelve.[2] The lack of serious disturbances in serum electrolyte levels, particularly of potassium, was noteworthy and was considered a sufficiently important factor in treatment value to give the drug a preferential status.[2] One to two 50 mg. tablets once daily is usually sufficient.

ANTIHYPERTENSIVE DIURETIC HYDROMOX®
QUINETHAZONE·TABLETS

1. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, Calif., Nov. 25-28, 1962.
2. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. *J. Amer. Geriat. Soc:* 11:945 (Oct.) 1963.

INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects, sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.

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County Society News

FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

Buchanan County Medical Society

Sixty St. Joseph and Northwest Missouri physicians attended the annual heart meeting of the Buchanan County Medical Society, the evening of February 5. A program on "Heart" followed a social period, dinner and business session of the Society. Dr. William B. Rost, president, presided.

Speaker for the scientific program was Dr. James G. Janney Jr., associate professor of internal medicine and director of the Department of Cardiology at St. Louis University. The speaker is a native of St. Joseph. Dr. Janney discussed "Common Cardiovascular Problems." He talked on symptoms, treatment and prognosis of various types of coronary disease, hypertension and mitral stenosis. The program was under the auspices of the St. Joseph Heart Association. The speaker was introduced by Dr. Lucien W. Ide, secretary of the Missouri Heart Association.

Irwin Rosenthal, M.D., *Secretary*

Grand River Medical Society

Forty-two members, wives and guests assembled at the Strand Hotel for the regular February meeting.

Following dinner, Dr. Joseph Fisher of St. Joseph, Councilor of the First District, gave a brief report on upcoming business for the Delegate's meeting at MSMA convention. The wives adjourned to their separate meeting while Dr. Ralph Duncan of the Duncan Clinic of Kansas City spoke to the doctors. He gave an interesting discussion of his experiences with the clinic's work in treating alcoholics.

During a brief business meeting it was unanimously voted that Dr. Herbert Booth of Hamilton be given honorary status. Dr. Booth entered practice in 1915.

Guests present included Miss Gelsinger, Division of Health now at Bethany; Mrs. Whitten of Trenton; Dr. and Mrs. Joseph Fisher of St. Joseph; Dr. Ralph Duncan of Kansas City; and Dr. Szymanski of Moberly.

Jack L. Vinyard, M.D., *Secretary*

SECOND DISTRICT

HARRY L. GREENE, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

Robert T. Manning, M.D., Assistant Professor of Medicine and Biochemistry, University of Kansas Medical School, Kansas City, Kan., spoke at a dinner meeting of the Chariton-Macon-Monroe-Randolph County Medical Society on Thursday night, February 13. His subject was "Enzymes and Disease." The meeting was held in the Woodland Hospital at Moberly.

After an extensive discussion of this subject by the speaker the discussion was thrown open to the audience. Additional interesting information was brought out in the general discussion and completed a fine scientific program.

During the business part of the meeting reports were given on the recent Sabin oral polio vaccination projects in the four counties with agreement by all as being quite successful. In addition to members, guests present were Dr. Leopold La Chance, Centralia; Mr. John Falletta, a KU Medical Student, and Dr. Manning. Members in attendance were as follows: Dr. G. C. Rice, Chariton County; Dr. Donald Eggleston and Dr. James Campbell, Macon County; Dr. F. A. Barnett, Monroe County; and Drs. A. P. Rowlette, J. Will Fleming Jr., T. S. Fleming, R. H. Young, W. D. Chute, C. C. Cohrs, Robert Hasson, P. V. Dreyer and C. C. Smith, Randolph County.

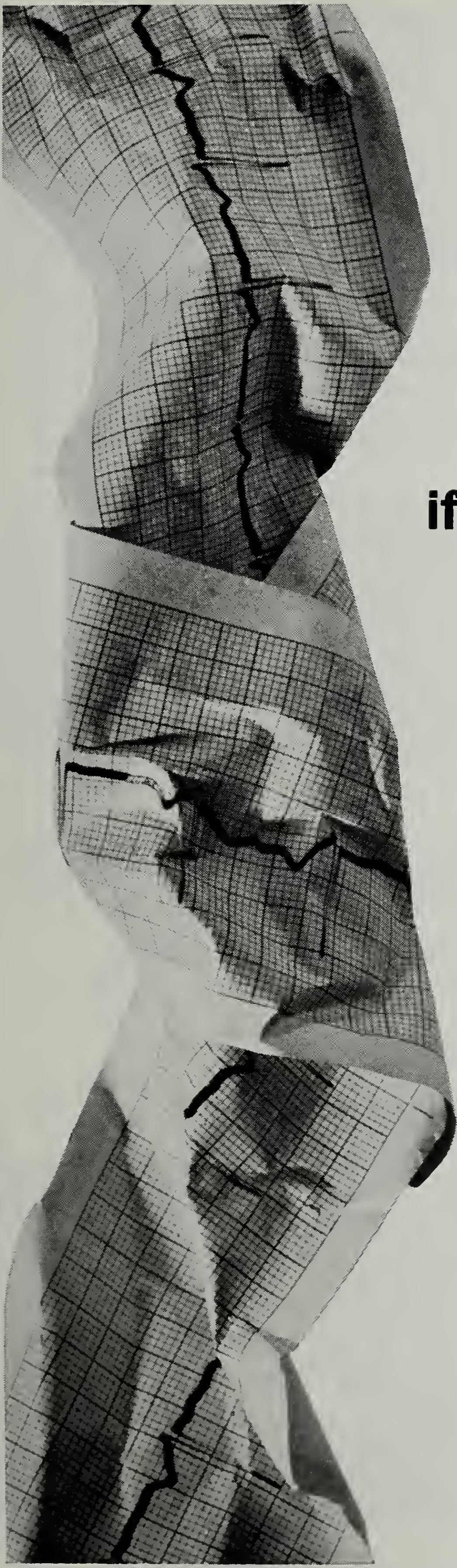
J. Will Fleming, M.D., *Secretary*

Marion-Ralls-Shelby County Medical Society

A dinner meeting of the Marion-Ralls-Shelby County Medical Society was held at the Moose Club in Hannibal on Tuesday evening, February 18. A social hour preceded dinner followed by the program.

A. M. Evans, M.D., Chief of Internal Medicine at the Ellis Fischel State Cancer Hospital in Columbia spoke to the group on "Chemotherapy of Cancer." This was an interesting and informative presentation and produced a fine general discussion following the formal presentation.

J. H. Walterscheid, M.D., *Secretary*



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FOURTH DISTRICT

PAUL R. WHITENER, ST. LOUIS, COUNCILOR

Lincoln-St. Charles County Medical Society

More than 40 people including doctors and guests attended a dinner meeting of the Lincoln-St. Charles County Medical Society at the "Charlevoix Nursing Home" in St. Charles on Tuesday night, February 25. The evening festivities began with a tour of this splendid nursing home followed by an enjoyable social hour and dinner.

The scientific program for the evening consisted of a full explanation of the details of the Sabin Oral Polio Immunization Clinics for Lincoln and St. Charles Counties to be held on March 15 and May 17, 1964. Numerous questions were posed and answered so that all members of the medical Society would be fully informed on this most important project.

Representatives of Lederle were present to answer questions concerning their part in the clinics. The medical Society appreciated the privilege of inspecting this outstanding nursing home and was grateful for the hospitality extended by the management.

R. J. Fleming, M.D., *Secretary*

SIXTH DISTRICT

O. B. BARGER, HARRISONVILLE, COUNCILOR

West Central Missouri Medical Society

The February meeting of the West Central Missouri Medical Society was held at the Country Club in Nevada, on Thursday, February 13. Total attendance, doctors and wives, was 28. There was a social hour followed by a dinner.

The scientific program was presented by N. K. Mitra, M.D., Hickman Mills, Mo. The topic was "Heart Murmurs in Children: Selection of Cases for Referral for Diagnostic Procedures." The discussion by Dr. Mitra of the differential diagnoses between functional and organic murmurs and the discussion of the diagnosis and treatment of congenital heart diseases was not only most instructive but was intensely interesting.

Following the scientific session, a business meeting of the Society was held. The minutes of the January meeting were read and approved. The membership application of Dr. Thomas A. Williams of Osceola was presented by the Credentials Committee with a recommendation for acceptance. On motion duly made and seconded, Dr. Williams was voted a junior membership in the Society.

There was a brief discussion of the oral polio vaccine clinic and the general opinion was that this should be postponed until fall. The secretary reported on the correspondence received, particularly that concerning the approaching annual meeting of the MSMA. The secretary asked for a liberal expense account to be used in maintaining an adequate hospitality suite at the MSMA meeting. This request was granted by unanimous vote of the Society. The Councilor, Dr. O. B. Barger, reported briefly on some of the important matters to come before the House of Delegates at the annual meeting and urged that all delegates be present. It was also urged that members of the Society appear before the Reference Committees to express their views on matters brought before the House of Delegates.

The president, Dr. Carter Luter, commented on the fact that the March meeting of the West Central Missouri Medical Society would occur in the same week as the annual meeting of MSMA and suggested that the March meeting of the Society be omitted. There being no objections to this suggestion, he announced that the next meeting of the Society would be in April.

There being no further business to come before the meeting, on motion duly made and seconded, the meeting was adjourned.

Roy W. Pearse Jr., M.D., *Secretary*

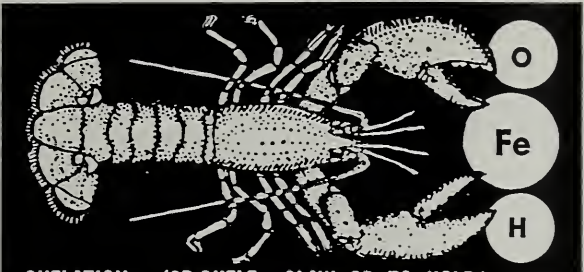
EIGHTH DISTRICT

DOYLE McCRAW, BOLIVAR, COUNCILOR

Ozarks Medical Society

Thirty people including doctors and their wives attended a dinner meeting of the Ozarks

Dr. and Mrs. Hollweg and Dr. and Mrs. McCraw were special guests.



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Manganese (as Manganese Betaine Citrate)	1.0 mg.
Zinc (as Zinc Betaine Citrate)	1.25 mg.
Magnesium (as Magnesium Betaine Citrate)	6.0 mg.
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Vitamin B-2	1.2 mg.
Vitamin B-12	6.0 mcg.
Niacinamide	10 mg.
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So pure . . . So good . . .
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everyone . . . including
the tiniest tots!

Waiting to be served, the group visited.

Medical Society at the Sands Motel in Aurora on Tuesday evening, February 11. Following a pleasant social hour, a delicious steak dinner was served and all were then ready to hear the distinguished speaker of the evening.

Dr. Kenneth Hollweg, Kansas City, President of the Missouri State Medical Association, gave the principal address of the evening and discussed in a practical manner the organizational structure of the State Medical Association and the basic importance of the active functioning of the County Medical Society. He then discussed briefly how this organizational set-up fits into the AMA.

There was concentrated attention to Dr. Hollweg's talk.

Those present were pleased to have as guests, along with Dr. Hollweg and Mrs. Hollweg, Dr. Doyle McCraw of Bolivar, Councilor of the eighth district, and Mrs. McCraw, and Ray McIntyre, Field Secretary of the MSMA. In his brief remarks, Dr. McCraw urged that as many members of the Society as possible attend the March meeting of the MSMA in St. Louis.

Paul B. Anderson, M.D., *Secretary*

NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

Mid Missouri County Medical Society

A dinner meeting of the Mid Missouri County Medical Society and the doctors' wives was held at the New Colonial Village in Rolla on Thursday night, February 27. The evening festivities began with a social hour followed by dinner and then the program.

The scientific speaker for the evening was William G. Hemenway, M.D., Director of the Department of Ear, Nose and Throat at the University of Missouri Medical School. His subject was, "What a General Practitioner Should Know About Recent Advances in the Management of Ear, Nose and Throat Problems." This was a most interesting and practical discussion and generated numerous questions which followed Dr. Hemenway's formal presentation.

M. K. Underwood, M.D., *Secretary*

TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

Butler-Ripley-Wayne County Medical Society

A dinner meeting of the Tri-County Medical Society was held at the Holiday Inn Restaurant, Tuesday night, February 25, in Poplar Bluff.

The scientific program for the evening was presented by J. W. Tosh, M.D., of the Poplar Bluff Hospital staff. His subject was "The Surgical Aspects of the Diaphragmatic Hernia."

W. D. Robertson, M.D., *Secretary*

The discharged
mental patient . . .
and Thorazine®
brand of chlorpromazine

"The average practitioner is quite capable of handling the vast majority of ex-institutionalized patients by regulation of medication, reassurance, manipulation of the environment where necessary, and . . . other technics." Kline, N.S.: Postgrad. Med. 27:620 (May) 1960.

The family physician must often assume responsibility for the discharged mental patient. Thorazine (chlorpromazine, SK&F) can be a valuable adjunct to the continuing care of this patient, because it helps prevent relapses by insulating him from the impact of stressful experiences. For successful rehabilitation and prevention of rehospitalization, however, the former mental patient—and often his family—also needs the guidance and counsel of his physician.

Many physicians are surprised by the high doses of Thorazine (chlorpromazine, SK&F) used in patients released to their care from mental hospitals. This surprise may be expressed by a drastic reduction in dosage "to play it safe"—with serious consequences for the patient.

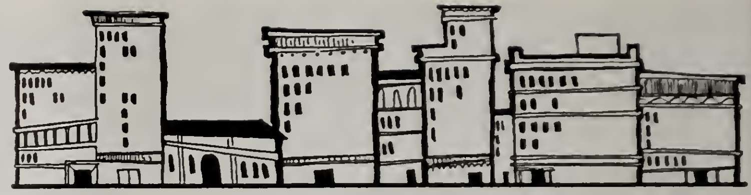
The successful maintenance of former mental patients requires adequate, often "high" dosage, and often for prolonged periods of time. Fortunately, these dosages do not mean greater risks for the patient. On the contrary, there is much less risk of serious side effects once a patient has become gradually accustomed to Thorazine (chlorpromazine, SK&F)—*regardless of dosage*—over a period of a few months. Continuing therapy is almost always well tolerated, and is essential to most patients' continued well-being.

Brief Summary: Thorazine (chlorpromazine, SK&F) has been successfully used for 10 years in the treatment of mental and emotional disturbances, and has proven highly effective in the maintenance therapy of former hospitalized mental patients. *Principal side effects:* The most frequently encountered side effect is transitory drowsiness. Other occasional side effects include: dry mouth, nasal congestion, constipation, miosis, dermatological reactions, photosensitivity, jaundice, hypotension, increased appetite and weight; very rarely, mydriasis, agranulocytosis, extrapyramidal symptoms. *Contraindications:* Comatose states or in the presence of excessive amounts of C.N.S. depressants.

For complete prescribing information, please see *PDR* or available literature.

SK&F *Smith Kline & French Laboratories*

From the Medical Schools



WASHINGTON UNIVERSITY

Ear Bone Bank

Washington University School of Medicine is one of 25 medical centers serving as Temporal Bone Banks in the United States.

A nation-wide effort is now underway to secure the temporal ear bones after death of people who have had some form of deafness. The goal is to correlate medical history of deafness with lesions which appear on the bones. Ear bones of normal subjects are also being sought to aid in the training of surgeons specializing in diseases of the ear. The bones are used only for research and not as replacements as in other programs such as eye and vascular banks.

"So little is known about why people are deaf," Dr. Theodore Walsh, Washington University's coordinator of the program said. Dr. Walsh is professor and head of the department of otolaryngology.

"The ear is so inaccessible the only possible way to add to our knowledge is to study the bones after they are removed after death. By correlating what we see with the records of hearing tests and the patient's past symptoms, we may better understand some of the causes of deafness," he said.

The Temporal Bone Bank program is sponsored by the Deafness Research Foundation and the American Academy of Ophthalmology and Otolaryngology. Financial support for the Ear Bone Bank program has recently come from the John A. Hartford Foundation through the Academy.

Goal of the program is to help broaden knowledge of the pathology that accompanies such types of deafness as otosclerosis, sudden deafness, congenital deafness, deafness following various childhood diseases, noise deafness, vascular disturbances and Meniere's diseases.

"We hope sometime to have a central repository for the temporal bones where they will be available for study by all scientists," Dr. Walsh said. "But this is not our current aim. Now we are trying to interest those who suffer from deafness to provide us with the bones after death."

A person may indicate his wish to donate his ear bones by depositing a form with the Temporal Bone Bank headquarters in Chicago. The donor carries a card with him indicating that the center headquarters should be contacted at the time of his death.

The bones must be removed immediately after death. This is done at no cost to the donor's family and with no cosmetic disfigurement. The bones are then processed by the nearest ear bone center and made available for study.

Further information on the Temporal Bone Bank may be obtained by writing Dr. Theodore Walsh, Washington University School of Medicine, St. Louis, Missouri 63110.

Heart Association Grants

The joint research committee of the Missouri and St. Louis Heart Association announced allocation of $80,584 to be used for study of heart and blood vessel diseases at medical schools in Missouri in the fiscal year beginning July 1.

The money will be in the form of grants-in-aid and fellowships. Washington University will receive $23,492 in the form of grants to Dr. Richard M. Krause, Dr. Alexis F. Hartmann Jr. and Dr. James M. Stokes, and a fellowship to Dr. Pierre Doucet.

This is the first year that the state and city associations have joined in the research program. Previously they made awards separately. The American Heart Association has not yet announced grants for the St. Louis area.

Coming Events

Dr. J. D. Watson, Professor of Biology at Harvard University and Nobel Laureate in Medicine and Physiology, will present the seventh annual Philip A. Shaffer Lecture on Monday, April 27 in Clopton Amphitheatre. He will speak on the role of ribosomes in protein synthesis.

The Alpha Omega Alpha lecture will be presented on April 30 by Dr. Sidney Goldring, associate professor of neurological surgery.

April 8 is the date of the annual Senior Research Assembly. Senior medical students who have done research during any of the four years of medical school are eligible to present their findings for faculty and other students.

Faculty Honors

Dr. Margaret Smith, professor of pathology, received a faculty citation at the annual Founders Day banquet February 22. Dr. Smith was a member of the pathology department at Johns Hopkins University from 1922 to 1929, at which time she joined the Washington University staff. Dr. Smith has done extensive research into the nature of encephalitis and salivary gland virus.

Dr. Carl A. Moyer, Bixby Professor and head of the department of surgery, has been named chairman of the Medical Scientist Training Committee which was recently established by the National Institute of General Medical Sciences, National Institutes of Health.

Dr. Carl V. Moore, Busch Professor and head of the department of medicine, has been named a member of the newly formed Drug Research Board of the National Academy of Sciences.

Dr. Meredith J. Payne, assistant in clinical surgery, was honored for professional achievement in the 1964 Bicentennial Salute to Women Who Work.

UNIVERSITY OF MISSOURI

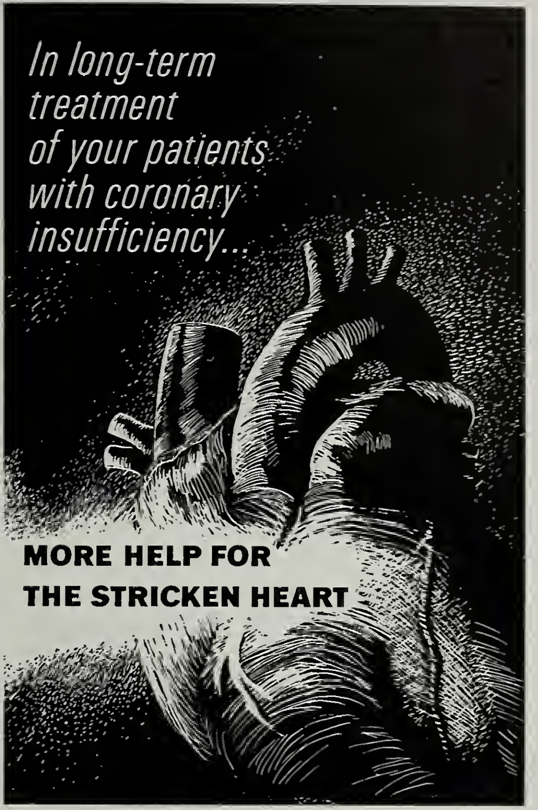
Trips and Talks

Dr. James A. Green, associate professor of anatomy at the University of Missouri Medical Center, spent February 14 to 16 at the Southwest Foundation for Research Education, San Antonio, Tex. The purpose of the trip was to consult with his research collaborators, Dr. Joseph W. Goldzieher and Dr. Herman Acevedo concerning their joint research on ovaries from Stein-Leventhal patients and their project studying the biochemistry and fine structure of normal human ovaries.

Dr. J. M. Martt, associate professor of the Department of Medicine and head of the Heart Station, attended a meeting of the West Central Missouri Medical Society April 9 in El Dorado Springs. The topic of discussion was "Current Status of Serum Lipids and Coronary Atherosclerosis."

Dr. Martt; Dr. George Wakerlin, American Heart Association; Dr. J. C. Edwards, St. Louis; Dr. Charles F. Grabske, Kansas City, and Dr. James G. Janney Jr., St. Louis, were panelists at a meeting of the Missouri Heart Association May 15 in Columbia. The topic of discussion was "Heart Attack." Members of the Missouri Heart Association and heart volunteers attended the meeting.

Dr. Frank B. Engley, professor and chairman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Side effects: Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. **Precautions:** Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. **Contraindications:** Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma. *Complete product information available in the product package, and to physicians upon request.* **Dosage:** 1 to 2 tablets, *before meals* and at bedtime. Individualization required. **Supplied:** Bottles of 50 tablets.

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of the Department of Microbiology at the University of Missouri Medical Center, attended executive board meeting of the Missouri Public Health Association, in Jefferson City, January 30.

Dr. Donald P. Durand, assistant professor of microbiology, presented a seminar covering the various aspects of virus-cell interactions at a meeting of the Department of Botany and Microbiology at the University of Oklahoma on February 6. About 30 professional people attended.

Dr. Richard M. Hyde, assistant professor of microbiology, presided over a session in the Trauma Conference held by the University of Missouri Postgraduate Medical Education division. The meeting was held on January 23 through 25 at the Medical Auditorium in Columbia. Dr. Hyde also presented a seminar covering research on "Immunologic Tolerance to a Mixture of Antigens" at the University of Iowa Department of Microbiology on February 7.

Dr. Fernando Tapia, chief of the section of Child Psychiatry at the University, led a short discussion period following a film entitled "If These Were Your Children." The meeting was held at the Carousel Nursery School and was sponsored by the Carousel Nursery School Association on February 6.

Dr. Tapia was also on a panel which discussed the topic of psychotherapy and then answered questions at the Memorial Student Union on February 14. The University Counseling Service sponsored the meeting which was attended by approximately 60 graduate students.

Dr. Kenneth Keown, professor and chief of the section of anesthesiology, was a guest speaker at the Twenty-Sixth Annual Convention of the Mid-South Postgraduate Assembly of Nurse Anesthetists. The meeting was held February 13 and 14 in Memphis, Tenn., and the topic of discussion was "Premedication." Dr. Keown was also the guest speaker at the January meeting of the Jasper County Medical Society, January 14. The lecture was on "Heart Failure in the Operating Room."

Dr. G. W. Eggers Jr., associate professor of anesthesiology, attended a conference on "Hyperbaric Oxygenation" in New York, February 12 through 15. The meeting was sponsored by the New York Academy of Sciences and the National Academy of Sciences.

Dr. John H. Landor, associate professor of surgery at the University of Missouri, was visiting professor of surgery at the University of Wisconsin School of Medicine. He gave two lectures and conducted teaching rounds on the surgical services. Phi Delta Epsilon medical fraternity sponsored the visit.

Dr. Samuel P. W. Black, professor of surgery, attended the annual meeting of the Neurosurgical Society of America held this year in Phoenix, Ariz., as the guest of Dr. George E. Roulhac of St. Louis.

Dr. John A. Buesseler, professor and chief of ophthalmology, and Dr. Felix N. Sabates, assistant professor and associate chief of ophthalmology, head, Retina Service, conducted sessions at the Postgraduate Medical Education Trauma Conference held January 23 through 25 at the Medical Center. Dr. Buesseler conducted a discussion on "Physical and Chemical Injuries of the Eye"; Dr. Sabates conducted a discussion on "Internal Injuries of the Eye," and together they conducted a discussion on the two topics.

Dr. John W. Irvine, head, Lions Eye Tissue Bank at the University Medical Center, representing the Lions Eye Tissue Bank of the University of Missouri Medical Center was a witness in Jefferson City at the signing of a proclamation by Governor John A. Dalton of Missouri declaring February, 1964 as Eye Donor Month.

Dr. William G. Hemenway, chief of the section of otolaryngology, was a visitor at the University of Colorado Medical Center in Denver January 5 through 7.

Dr. Owen J. Koeppe, who is on sabbatical leave, returned for a week's visit. He gave a series of lectures on "Nucleic Acid Metabolism" for the first year medical students during his visit. Dr. Koeppe is taking his sabbatical leave at Tufts University at Boston, working under Dr. Meister.

Dr. Thomas D. Luckey, chairman and professor of the Department of Biochemistry; Arnold Smith, a fourth year medical student; Dr. James M. A. Weiss, professor and chairman of the Department of Psychiatry; Dr. Violet B. Matovich, assistant professor and chief of the section of neurology; Dr. Ernest E. McCoy, associate professor of pediatrics, and Dr. Robert L. Jackson, chairman and professor of the Department of Pediatrics, attended the Joseph P. Kennedy Jr. Foundation Awards Dinner in New York City, February 5.

Visitors

Dr. Seymour S. Cohen, professor of biochemistry at the University of Pennsylvania School of Medicine, presented a lecture on February 6 at the University of Missouri School of Medicine entitled "Virus Induced Enzymes." Dr. Cohen also gave a special seminar on February 7, entitled "Sponges and D-arabinosyl Nucleosides." Dr. Cohen was one of the special topics in biochemistry speakers scheduled for this year.

ELLIS FISCHEL STATE CANCER HOSPITAL

Dr. John S. Spratt Jr., Chief Surgeon, Ellis Fischel State Cancer Hospital, was guest speaker at the Gastrointestinal Conference held December 5, 1963, at Washington University School of Medicine. He was guest speaker and panelist at the Cleveland Clinic Educational Foundation on Colorectal Surgery in Children and Adults on January 7, 8 and 9, at which time he discussed "The Growth Rates of Neoplasms of the Colon and Rectum." Dr. Galen B. Cook, Surgeon, also participated as panelist at the Cleveland Clinic Educational Foundation.

Dr. Spratt discussed "Definitive Care in Abdominal Trauma" at the Trauma Conference held January 24 at the University of Missouri Medical Center. He participated in the Tumor Conference, and lectured to the staff at St. John's Hospital, St. Louis, February 11 and 12. On February 14, he participated in the Tumor Conference held at the Yakima Medical Center, Yakima, Wash. On February 15 and 16, he was guest speaker at the Cancer Symposiums held in Richland and in Bellingham, Wash. These were sponsored by the Washington Division of the American Cancer Society. Dr. Spratt spoke on "The Rates and Growth of Cancers" on February 20 at the Pemiscot County Medical Society. Dr. Spratt attended the Central Surgical Association in Rochester, Minn., February 27, 28 and 29, where he presented a paper, with Dr. Hiram C. Polk, entitled "Mortality After Operations for Colonic Cancer."

Dr. A. McChesney Evans, Chief of Internal Medicine at Ellis Fischel State Cancer Hospital, discussed the story behind the U. S. Surgeon General's Advisory Committee Report on Smoking and Health at the Kiwanis Club, Columbia, February 4. He also spoke and showed slides on "Chemotherapy of Cancer" at a dinner meeting of the Marion-Ralls-Shelby County Medical Society February 18, at the Moose Lodge, Hannibal.

A week-long public health and institutional nurse orientation course was conducted February 17 to 20 at the Ellis Fischel State Cancer Hospital. These programs on home care of cancer patients are regularly scheduled by the Missouri State Division of Health with the cooperation of personnel at Ellis Fischel Hospital.

More than 60 patients of Ellis Fischel State Cancer Hospital were provided hair dressing service February 10 by the Columbia Cosmetologist Association in celebration of the 14th Annual National Beauty Salon Week.

reduce or obviate the need for transfusions and their attendant dangers

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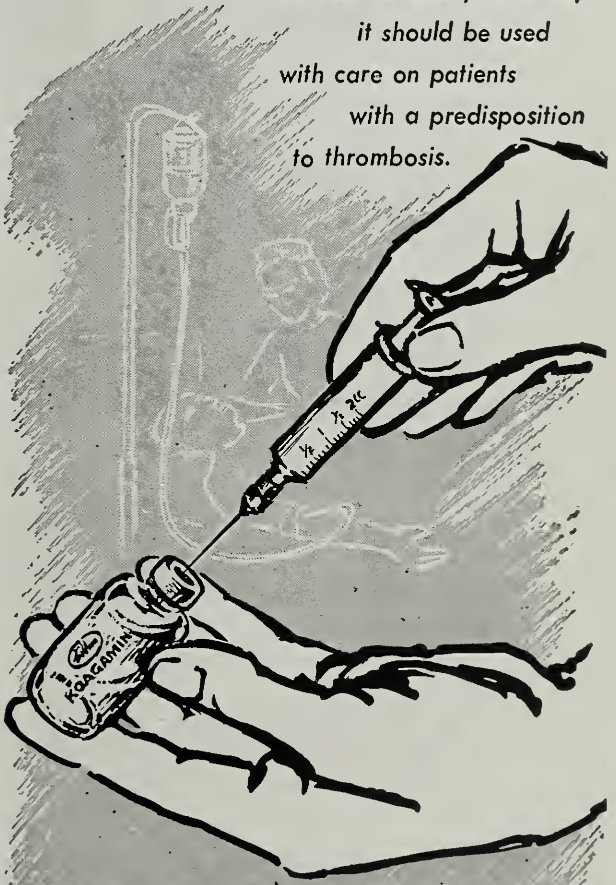

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vantage of causing fewer
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dications: Mild to moder-
e hypertension, especially
hen complicated by edema.

Average Dosage: 1 Tablet #2 (syrosingopine 1 mg./hydrochlorothiazide 25 mg.) t.i.d. For patients requiring less syrosingopine, substitute Tablet #1 (syrosingopine 0.5 mg./hydrochlorothiazide 25 mg.).

Side Effects & Precautionary Measures

Singoserp (syrosingopine): Use cautiously in patients with peptic ulcer. Discontinue several weeks prior to surgery, if possible.

Occasional side effect: nasal congestion. Rare side effects: gastric irritation, drowsiness, fatigue, nausea, headache, emotional depression, skin rash, restlessness, anxiety.

Esidrix (hydrochlorothiazide): Watch for signs of fluid or electrolyte imbalance. Further electrolyte depletion may cause hypochloremic alkalosis and hypokalemia. Since the latter may precipitate digitalis intoxication, watch carefully patients taking digitalis or its glycosides.

Pay special attention to electrolyte balance of patients with severe renal or hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma. Contraindicated in patients with oliguria and complete renal shutdown.

Rare reactions: purpura with or without thrombocytopenia, skin rash, photosensitivity, urticaria. Thiazides may decrease glucose tolerance; use cautiously in diabetics. Hyperuricemia may occur but is readily reversed by a uricosuric agent.

Occasional side effects: nitrogen retention (in hypertensive patients), nausea, anorexia, headache, restlessness, constipation.

Supplied

Tablets #2 (white), each containing 1 mg. syrosingopine and 25 mg. hydrochlorothiazide; *Tablets #1* (white), each containing 0.5 mg. syrosingopine and 25 mg. hydrochlorothiazide.

References

1. Kolodny, A. L., and Dabolins, R.: Angiology *11*:180 (June) 1960.
2. Bare, W. W.: J. Amer. Geriat. Soc. *8*:795 (Oct.) 1960.
3. Lisan, P., and Balaban, S. A.: J. Amer. Geriat. Soc. *8*:803 (Oct.) 1960.

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SAINT LOUIS UNIVERSITY

Grants

Grants-in-aid and fellowships totaling $29,482 have been awarded the School of Medicine by the Missouri and St. Louis Heart Association Joint Research Committee, it has been announced by Dr. Theodore Cooper, vice chairman of the committee. Dr. Cooper is associate professor of surgery at St. Louis University and represents the St. Louis Association. One year allocations will begin July 1.

Grants in the amount of $14,982 have been awarded to Dr. George C. Kaiser, assistant professor of surgery; Dr. Drummond H. Bowden, associate professor of pathology, and Dr. Howard Yanof, assistant professor of physiology. Fellowships totaling $14,500 have been awarded to Dr. Phillip Carr, Dr. Bernard Swaykus and Dr. Vijay S. Hiremath, all of whom will become fellows in cardiology in July.

The Department of Pharmacology of the St. Louis University School of Medicine has been awarded a new grant in the amount of $25,000 by the National Science Foundation for the support of a project directed by Dr. Harold L. Segal, associate professor of pharmacology.

Under the grant, Dr. Segal is attempting to determine the sequence of amino acids of enzymes at the particular site in the protein chain where catalytic action takes place. Amino acids form the chief structure of proteins.

Enzymes are proteins capable of producing catalytic action and speed the rate of chemical action in the body. In order to understand the chemical mechanism by which enzymes carry out this catalytic function, it is necessary to understand the structure of enzymes.

In his research, Dr. Segal will attempt to isolate the segment of the protein change that contains this active site, and will try to determine the amino acid sequence in the small segment.

Dr. Norman E. Melechen, associate professor of microbiology, has received a National Foundation—March of Dimes renewal grant of $26,733 for the support of work dealing with latent infection by bacteriophages, kinds of viruses that invade bacteria. How viruses can remain hidden and harmless and then be triggered to infective and damaging action is being studied.

Scholarships

Scholarship awards totaling $6,710 were presented to 11 medical students in January. Awards from anonymous sources in the amount of $3,350 went to eight students. Scholarships from St. Louis University totaling $1,400 were awarded to three students. Other awards included a $1,000 scholarship from Charles Pfizer and Company and a $960 scholarship known as the Levi and Peppe Wolfort scholarship. The latter award was founded by Mr. Sigmund Wolfort and Miss Clara Wolfort in memory of their parents. Scholarship recipients are members of the freshman, sophomore and junior classes.

In the News

A Division of Child Psychiatry has been established at Cardinal Glennon Memorial Hospital under the direction of Dr. Robert Gorday, assistant professor of psychiatry at St. Louis University School of Medicine and Child Psychiatrist at Cardinal Glennon Memorial Hospital for Children.

Dr. Thomas F. Frawley, director of the department of internal medicine, and Dr. Edward T. Auer, director of the department of neurology and psychiatry, became honorary members of the Phi Rho Chapter of the Phi Chi Medical Fraternity at the fraternity's recent Founders Day banquet. Dr. Alrick B. Hertzman, director, department of physiology, was master of ceremonies.

Dr. Ronan O'Rahilly, director, department of anatomy, attended the National Institutes of Health conference on "Aseptic Necrosis of the Femoral Head" and was discussant of a paper on the development and structure of the upper end of the femur. He attended a National Academy of Sciences meeting in Chicago on children's prosthetic problems.

Dr. Armand E. Brodeur, associate dean, was a program participant at the meeting of the American College of Radiology held in February. He appeared before programs held in Phoenix and Tucson.

Dr. William A. Altemeier, Christian R. Holmes Professor of Surgery and Chairman of the Department at the University of Cincinnati, is scheduled to deliver the annual Hanau W. Loeb Lecture at the School of Medicine on Tuesday, March 10. He will speak on "Some Interesting Studies of Bacteriodes Infections in Surgery." The lecture is sponsored by the Phi Delta Epsilon Medical Fraternity.

Dr. Charles M. Pomerat, Director of Research, Pasadena Foundation for Medical Research, Pasadena, delivered the annual Alphonse M. Schwitalla lecture sponsored by Alpha Omega Alpha, honorary medical society, January 30.

Dr. Pomerat spoke on "Recent Advances in the Use of Cell Cultures in Experimental Medicine." He delivered a second lecture before members of the medical faculty in Miller Hall, Firmin Desloge Hospital. It was entitled "Dynamic Activity Associated with Neuronal Function."

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Information for Contributors

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Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet. Colored illustrations will be used when suitable if author assumes the actual cost.

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WASHINGTON

At a hearing on H.R. 10041, Hospital and Medical Facilities Amendments of 1964, before the House Interstate and Foreign Commerce Committee on March 12, AMA testimony was presented by Drs. Percy E. Hopkins, Chairman of the Board of Trustees; Francis C. Coleman, Chairman of the Council on Legislative Activities, and Willard A. Wright, Chairman of the Council on Medical Service.

In part, testimony of Dr. Wright was:

It is our recommendation that the Hill-Burton program be continued. We agree that some of its objectives should be redefined and some changes made in the program in order to make it more effective.

We believe that, with few exceptions, the Hill-Burton Construction Program has been administered effectively and in the interest of the public; and while we further believe that the objectives of the original legislation have for the most part been achieved, we agree that with a shift in emphasis toward modernization, and some modifications in the existing program, continuation of Hill-Burton is warranted for a period of time.

Our support of this type of legislation is long standing. The American Medical Association has on numerous occasions gone on record as appproving the principle of hospital construction by the use of grants-in-aid. In 1940, the AMA House of Delegates supported President Roosevelt's plan for the construction of hospitals with federal funds, and in 1945, endorsed the AMA Board of Trustees' support of the original Hill-Burton bill, saying:

"This action of the Board of Trustees is within the (AMA) program of constructive action toward improving the health of the American people."

On a number of occasions, AMA representatives have appeared before committees of congress to give the views of the Association with respect to legislative proposals to extend and to amend the Hill-Burton Act. We have been aware of our obligation to provide the Congress with information and expert opinion which could add additional substance to its discussions and deliberations. And while we have, in the main, approved the Hill-Burton program, we have also from time to time offered what we have believed to be constructive criticism. We hope to do so again today.

Specifically, the American Medical Association supports the principle of matching grants for the construction and modernization of hospitals. We further support what appears to be a shift in emphasis toward grants for the modernization of hospital and related facilities, the combining of categorical grants, and the principle of federal support of construction through guaranteed mortgages. In these areas and in others, we support H.R. 10041. However, we shall note also where amendment to the provisions of H.R. 10041 would, in our opinion, establish a more effective program.

We believe that the immediate and major emphasis of Hill-Burton should be directed toward the improvement and effective use of existing facilities. It appears to us that the greatest need is for modernization and renovation programs.

According to the state Hill-Burton agencies, as of Jan. 1, 1963, there were 338,170 unacceptable beds which represented approximately 19 per cent of existing beds. Between 1957 and 1963, the number of inpatient beds increased from 1,505,695 to 1,786,461—an increase of 19 per cent. During this same period, the number of unacceptable beds, according to the state Hill-Burton agencies, increased from 285,149 to 338,170—also an increase of 19 per cent. Accordingly, in spite of construction during this period of time, the percentage of existing beds which are unacceptable remained the same.

Another study, in 1956 by the American Hospital Association, indicated that almost one half (48 per cent) of all hospitals in the country needed some form of modernization of existing buildings at an estimated total cost of about $1 billion. Approximately 80 per cent of the responding hospitals reporting a need for modernization stated that major repairs were needed in buildings and plants at an average cost of $126,000 per hospital. Approximately the same proportion of hospitals reported a need for modernization of their equipment and mechanical systems, averaging $99,000 per hospital. Finally, one more study, in 1960 sponsored by the Public Health Service in cooperation with the state Hill-Burton agencies, indicated that it would cost $3.6 billion to modernize or replace obsolete facilities without adding additional beds.

The conclusion that the need is for renovation and modernization appears justified in the light of these statistics. . . .

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. . . a new oral anabolic agent, combines high anabolic activity with outstanding tolerance. Although its androgenic influence is extremely low*, women and children should be observed for signs of slight virilization (hirsutism, acne or voice change), and young women may experience milder or shorter menstrual periods. These effects are reversible when dosage is decreased or therapy discontinued. Patients with impaired cardiac or renal function should be observed because of the possibility of sodium and water retention. Liver function tests may reveal an increase in BSP retention, particularly in elderly patients, in which case therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage in adults, *usually 1 tablet t.i.d.;* young women, *1 tablet b.i.d.;* children (school age), *up to 1 tablet t.i.d.;* children (pre-school age), *½ tablet b.i.d. Shows best results when administered with a high protein diet. Available as scored tablets of 2 mg. in bottles of 100.*

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Across
Missouri

Dispensing Drugs Under Kerr-Mills

Attorney General Eagleton ruled that physicians dispensing drugs to patients may be reimbursed for the basic cost of the drug plus $1.00 handling charge per prescription. He had been asked for such a ruling by the Division of Welfare. The ruling follows:

> This is in answer to your letter requesting an opinion of this office as to whether or not the purchase of drugs and medicines from a physician and payment of a $1.00 handling charge falls within the prohibition against the payment of "physician's fees" in Subsection 6 of Section 208.150, RSMo Cum. Supp. 1963.
>
> The subsection reads as follows: "Any individual entitled to receive care or services under this section may obtain such care and services from any provider of services with which an agreement is in effect under this section and which undertakes to provide him such care and services, as authorized by the Division of Welfare."
>
> This subsection prohibits the payment of the "attending physician's fees." However, there is no prohibition of the payment of charges for physician's services. The limiting language used in the statute of "physician's fees" shows a legislative intent to prohibit only the payment of the doctor's professional examination and attendance charges. This language likewise shows an intent to exclude from its orbit the dispensing of drugs which the doctor may decide to prescribe or may direct the patient to procure. Indeed, the filling of his own prescriptions is a distinct service that may be performed by the physician as provided for by Section 238.010, RSMo 1959.
>
> Therefore, it is the opinion of this office that the cost of drugs, together with a nominal handling charge of $1.00 paid to an attending physician who dispenses his own drugs, is not to be considered "physician's fees" as that term is used in Subsection 6 of Section 208.150, RSMo Cum. Supp. 1963.

Missouri's aging welfare recipients suffering from certain diseases were eligible, effective Oct. 13, 1963, to receive certain drugs free of charge.

On April 1, the list of drugs was expanded to include aging individuals on relief, suffering from respiratory ailments, pain and mental diseases.

This service is part of the $10,000,000 health care for the aging program voted by the state legislature implementing provisions of the Kerr-Mills Act. Of this total appropriation $3,200,000 was designated for drugs.

The law authorizes the Director of Welfare and an advisory board to increase or reduce the drug benefits according to legal appropriation of funds. This control is necessary to prevent deficit budget operation, which is illegal in Missouri.

Registered Physicians in Missouri

As of July 1, 1963, there were 5,955 physicians registered and living in Missouri. Of these 4,794 were M.D.'s and 1,161 were D.O.'s.

In an article in *The Health Herald* of the Division of Health, it was said that every county in the state has at least one registered physician. All but six counties had M.D.'s and all but two counties has registered D.O.'s.

The population-physician ratio was 748 people to each registered physician living in Missouri.

More than half of the physicians registered with the Board of Healing Arts gave out-of-state addresses on their applications for registration.

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from
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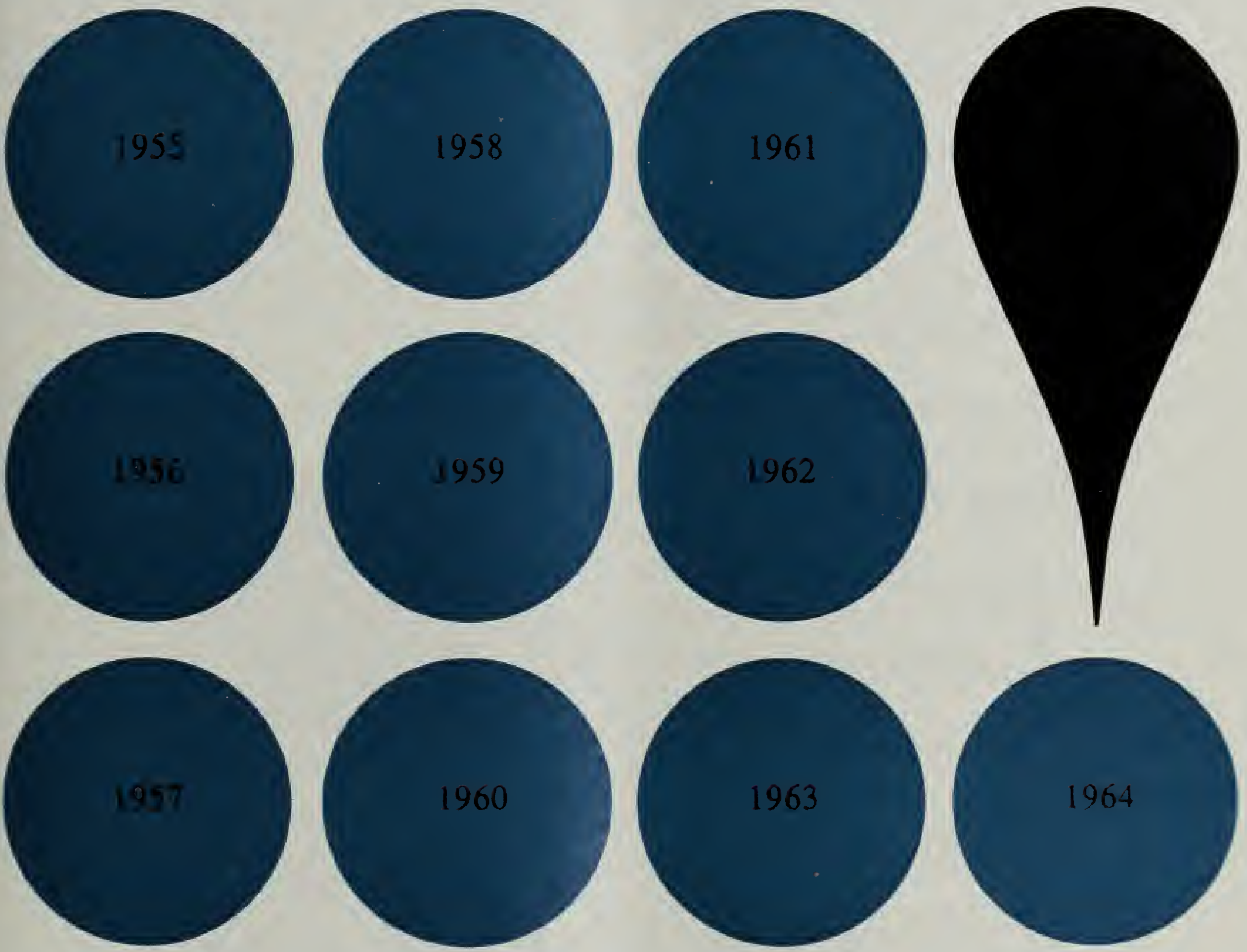

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C. G. STAUFFACHER, M.D., Secretary

Missouri Academy of General Practice

The Ninth Annual Spring Clinical Conference of the University of Missouri School of Medicine will be held at the Medical Center on Wednesday and Thursday, May 20 and 21. An excellent program has been developed and should be of much interest. The Wednesday morning, May 20, session will be devoted to "Cardiology"; the afternoon session to "Endocrinology." The Thursday morning, May 21, program will be concerned with "Psychiatric Emergencies in Medical Practice"; and the afternoon session will be on "Gastroenterology." Both instate and outstate speakers will appear on this two day conference. This program is acceptable for 11 accredited hours by the AAGP.

It is anticipated that a good number of Academy members over the entire state will be present to profit from this attractive program.

Again this year on the first day of the spring clinical conference, a luncheon meeting for the junior medical students will be held in the Student Union Building sponsored by the Public and Professional Relations Committee of the MAGP and the Committee on Rural Medical Service of the MSMA. This has become an annual affair and seems to be a well accepted project by the medical students. Following the luncheon there will be short talks on solo practice, partnership practice and group practice with an opportunity given to students to ask questions of those on the panel. In addition, the President of the MAGP and the President of the MSMA will present short talks pertaining to the programs of these two organizations.

The Board of Directors of the MAGP will hold its annual spring meeting on Wednesday night, May 20, at the close of the first day's session of the MU Spring Clinical Conference. The board will meet at the Daniel Boone Hotel in Columbia beginning at 6:00 p.m.

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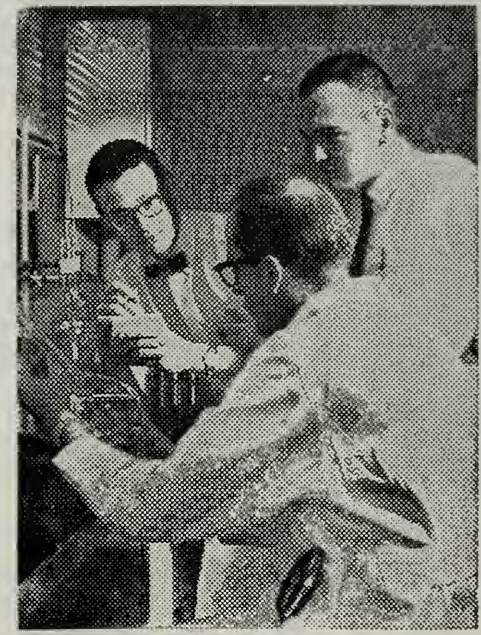

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Lower thiazide dosage

"Hydrochlorothiazide [Esidrix] lowers the blood pressure, and its antihypertensive activity is potentiated by syrosingopine [Singoserp], allowing for a reduction of the dose of diuretic substance without a decrease in control of the disease."[2]

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"The combination of syrosingopine [Singoserp] and hydrochlorothiazide [Esidrix] not only has the hypotensive effects of reserpine and hydrochlorothiazide but has the added advantage of causing fewer side-effects."[3]

Indications: Mild to moderate hypertension, especially when complicated by edema.

Average Dosage: 1 Tablet #2 (syrosingopine 1 mg./hydrochlorothiazide 25 mg.) t.i.d. For patients requiring less syrosingopine, substitute Tablet #1 (syrosingopine 0.5 mg./hydrochlorothiazide 25 mg.).

Side Effects & Precautionary Measures

Singoserp (syrosingopine): Use cautiously in patients with peptic ulcer. Discontinue several weeks prior to surgery, if possible.

Occasional side effect: nasal congestion. Rare side effects: gastric irritation, drowsiness, fatigue, nausea, headache, emotional depression, skin rash, restlessness, anxiety.

Esidrix (hydrochlorothiazide): Watch for signs of fluid or electrolyte imbalance. Further electrolyte depletion may cause hypochloremic alkalosis and hypokalemia. Since the latter may precipitate digitalis intoxication, watch carefully patients taking digitalis or its glycosides.

Pay special attention to electrolyte balance of patients with severe renal or hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma. Contraindicated in patients with oliguria and complete renal shutdown.

Rare reactions: purpura with or without thrombocytopenia, skin rash, photosensitivity, urticaria. Thiazides may decrease glucose tolerance; use cautiously in diabetics. Hyperuricemia may occur but is readily reversed by a uricosuric agent.

Occasional side effects: nitrogen retention (in hypertensive patients), nausea, anorexia, headache, restlessness, constipation.

Supplied

Tablets #2 (white), each containing 1 mg. syrosingopine and 25 mg. hydrochlorothiazide; *Tablets #1* (white), each containing 0.5 mg. syrosingopine and 25 mg. hydrochlorothiazide.

References

1. Kolodny, A. L., and Dabolins, R.: Angiology *11*:180 (June) 1960.
2. Bare, W. W.: J. Amer. Geriat. Soc. *8*:795 (Oct.) 1960.
3. Lisan, P., and Balaban, S. A.: J. Amer. Geriat. Soc. *8*:803 (Oct.) 1960.

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Woman's Auxiliary

We have just completed our 39th Annual Convention and it was indeed an attractive affair due to the fine efforts of Doris Cannon, Convention Chairman; Virginia Haynes, President of the St. Louis City Auxiliary; Helen Sanders who steered a fine river boat party on Sunday evening and of all the people involved in these committees; it was fun and our thanks to all of you.

Mrs. Delevan Calkins

Again the gavel has changed hands as I accepted it from Jane Crispell who has coached me in the knowledge of the many responsibilities involved in taking this symbol of order.

Venus Schattyn, beloved past president ('62-'63) installed the officers whose aid it will be my good fortune to have in the coming year: Mrs. Ralph Bohnsack, president-elect; Mrs. James K. Ritterbusch, Mrs. Maurice A. Diehr, Mrs. Glenn O. Turner, Mrs. Robert H. Stewart, the four vice presidents; Mrs. C. Stuart Exon, recording secretary; Mrs. John M. Williams, treasurer; Mrs. James A. Reid, auditor; Mrs. Thomas Thale, corresponding secretary and Mrs. Oliver E. Tjoflat, parliamentarian.

The coveted gold cup donated by Dr. and Mrs. Charles T. Shepherd for the most outstanding auxiliary of the year went to the Grand River Auxiliary and Marty Vandiver, president, proudly accepted this award. In past years the cup has been won by the following counties: Cole, 1955-56; Pettis, 1957; Jasper, 1958-59; St. Louis County, 1960 and Jackson, 1963. A special award was given the St. Louis City Auxiliary for the largest increase in donations to the AMA-ERF Loan Program.

We had three honored guests with us; lovely Mrs. C. Rodney Stoltz our national president attended all our meetings and was an impressive speaker at the Monday luncheon held at the Three Fountains in Gaslight Square. Mrs. Paul Gray, President of the Southern Medical Auxiliary battled the miserable weather to be with us at Tuesday's luncheon. She added much to the proceedings and extended her personal invitation to all of us to attend their convention in Memphis this fall, November 16 to 19 when Missouri's Ruth Kelling will be installed as president. Mrs. Willard Scrivner, president-elect of the Illinois Auxiliary was with us for all of our sessions and we were sorry that Illinois's President could not come with her and that the representatives of Kentucky's Auxiliary were unable to attend. It was nice to have these special guests at our annual meeting.

The Fifth and Sixth Districts have graciously offered to be our hostesses for the Fall Conference and Board meeting on October 28 and 29 at beautiful Tan-Tar-A Resort at Osage Beach. This is the prettiest time of the year in Missouri and a good time to urge your husband to do some fishing or relaxing; do plan to bring him along.

Many fine reports were given on county activities for the year at your business meetings and some of the resolutions presented and passed were: that we continue to support "Operation Hometown" in every way possible; that we continue to encourage membership in unorganized counties through members-at-large and assist that chairman where possible; that in the interest of future memberships, we promote contact with and recognition to WASAMA (Medical Students' Wives) organizations; that we enlist support from the MSMA and county medical societies to encourage membership of wives in auxiliary and that "we explore" the degree of success of areas where the doctors automatically pay the state and national dues of their wives along with their own dues.

As you see we are interested in increasing our membership. We would love to see the dream come true of every doctor's wife as an Auxiliary member. Think what we could accomplish in our communities under such circumstances.

Volume 61, Number 5—May, 1964

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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FRANCIS J. BURNS, M.D., *St. Louis*

The Management of Polypoid Lesions Of the Colon and Rectum

A series of 703 patients with polypoid lesions of the rectum or colon or both is presented with report of the results and the methods of treatment used.

Dr. Burns is Associate Professor of Clinical Surgery, St. Louis University School of Medicine.

A RATHER common lesion of the rectum or colon that frequently demands attention is the "polyp." This is generally meant to indicate an adenoma, or papilloma, but Morson[1] believes, and rightly so, that the term "polyp" is used too loosely. After all, the word "polyp" is purely descriptive, and one should specify just what type of polyp is under discussion.

For the purpose of this presentation, the polypoid lesions mentioned are mostly adenomata and papillomata. Other types, such as the hamartomas, the inflammatory familial polyposis and pneumatoides intestinalis cystica are not included.

In a personal series of 703 patients with polypoid lesions of the rectum and/or colon, there were 409 males and 294 females. The average age was 52 years. The youngest was 2 years of age, the oldest 87.

Signs and symptoms were present in 120 patients (17 per cent). In order of frequency, the most common signs and symptoms were bleeding, the production of mucus, protrusion through the anal orifice and change of bowel habits.

The number of lesions encountered in these 703 patients was 1,348. In 528 patients, only one tumor was found, and 175 patients had more than one tumor. In this latter group the number varied from two to 55.

The majority of the tumors were small, and the broadest surface measurement was between 0.5 centimeters and 5 centimeters though there were two patients with 10 centimeter lesions.

The diagnoses were established by the usual methods for examination of the rectum and colon. The most important of these were palpation with the examining finger, visualization via an endoscope and roentgenologic studies. The 10 inch sigmoidoscope was the most useful instrument, but a 14 inch instrument was often used. In every instance in which a tumor was discovered, a contrast barium enema with x-ray was ordered. Because the majority of these lesions occur in the lower aspect of the colon and in the rectum, they can be palpated by the examining finger or visualized with an instrument. When such a lesion is found by palpation, especially if it is pedunculated, one should not attempt to pull it through the anal orifice because of the danger of avulsion from its pedicle, with resultant bleeding. It is better to insert an instrument and visualize the tumor, or at least to wait until the patient is in the operating room of a hospital.

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[1] Morson B. C.: Precancerous Lesions of the Colon and Rectum, J.A.M.A. **179** (Feb. 3) 1962.

Of the 1,348 lesions in this group of patients, 1,147 were visualized with a sigmoidoscope, and 191 lesions were discovered by means of roentgenologic studies of the colon, palpation of the colon at time of operation and colonoscopy at time of operation. The remaining 10 occurred on a colostomy stoma. The various segments of the colon harboring polypoid lesions, and their number are as follows: upper pelvic colon, 69; descending colon, 48; transverse colon, 45; ascending colon, 13, and cecum, nine.

Not every lesion was submitted for tissue diagnosis. Many were small in size, presumed to be benign on gross inspection, and were destroyed in situ by electro-desiccation. However, a tissue diagnosis was made in 281 patients. Of these, 181 were adenomata, 28 papillomata, and microscopic evidence of malignancy was found in 51 others. In addition, there were 16 cases of adenocarcinoma, four of carcinoid tumors and one of melanoma. Thus 68 patients (9 per cent) had evidence of malignancy, varying from a localized microscopic degree to a "full blown" carcinoma.

The various methods of treatment and the number of tumors treated were: electro-desiccation, 771; excised with snare, 163; colotomy with polypectomy, 34, and colon resection, 53; excised with associated carcinoma, 90 (colon resection and/or abdomino-perineal resection); excised with anorectal operation, 46; local excision, 27; procto-sigmoidectomy, four (abdomino-perineal "pull through"); passed with enema, two and not treated, 75.

Because the majority of the lesions were so accessible, they were either eradicated in situ using electro-desiccation via a sigmoidoscope, or excised by means of a snare with electro-desiccation of the base of the tumor.

The snare is the most efficient instrument for the removal of pedunculated tumors.

Usually a biopsy was not made, but the entire tumor was submitted as a specimen. In the case of larger tumors, biopsies were made from several different areas prior to definitive treatment of the tumor.

Colotomy with polypectomy is not done as frequently in later years as a segmental colon resection. The risk seems to be no greater and there is no added morbidity with resection. Colonoscopy is carried out as a routine procedure for polypoid colonic lesions, and is a rewarding maneuver. Many tumors were discovered in this fashion that could not be diagnosed otherwise. Generally two colotomy openings are made, one in the transverse colon and one in the pelvic colon. Occasionally, a colotomy is made also at the base of the cecum.

Local excision was used for tumors in the rectum, and this included a posterior proctotomy approach, which was carried out in five instances. Sphincter function was unimpaired after division and reapproximation of the musculature in this operation.

An abdomino-perineal "pull through" operation was performed in four patients, all with large papillomata of the rectum, the so-called villous tumors.

No treatment was carried out in 75 patients, either because they went elsewhere, refused treatment or for various other reasons.

The only complication that developed was postoperative bleeding, and this occurred in three patients. It ceased spontaneously in every case, and blood replacement was necessary only one time. There was no morbidity and only one death. The patient with melanoma of the rectum died six months after an abdomino-perineal resection.

Recurrence of the tumor was found in three patients, and in 44 patients (6 per cent), more tumors developed at a later date.

After treatment, reexamination is made in one month, then at six month intervals for two years, then at 12 month intervals thereafter. A colon x-ray is advised every two years.

SUMMARY

Polypoid lesions of the colon and rectum occur rather frequently. The majority of such lesions are readily accessible for treatment via the sigmoidoscope, and as such can be taken care of in the office or on an outpatient basis in a hospital.

A variety of methods of treatment is available, depending upon the size and location of the lesion, and various other factors. These are outlined and briefly discussed.

In this particular series of 703 patients with polypoid lesions of the colon or rectum, 68 patients (9.6 per cent) had some degree of malignancy, and in 44 patients (6 per cent), more tumors developed at a later date.

The complications were few, there was no morbidity and only one death (a patient with melanoma of the rectum).

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From Mental Status to Diagnosis

A practical mental status examination useful to the practicing physician is described.

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"A Look at the Forests Rather Than the Trees"

The multiplicity of individual psychiatric diagnoses with their subtle differences about which psychiatrists themselves may disagree, has led to an avoidance of psychiatric diagnoses by the practicing physician. There is, however, an abbreviated mental status examination which will will give a practicing physician an accurate, category diagnosis of any mentally ill patient.

The necessary information for such an examination is already available to the physician by the time he completes his history. It becomes a matter of organizing the information available into a frame of reference which will be useful.

The psychiatric diagnosis is based upon observations made by the physician during his association with the patient. These observations can be organized into five areas, namely: anxiety, affect, thinking, sensorium, and behavior. Observations of a sixth area, appearance, may not be diagnostic by themselves but lend support to the diagnosis.

Definition of Areas of Mental Status

1. Anxiety (What Is Its Level?)

Anxiety is a feeling state which the patient experiences. Patients usually refer to this feeling as one of being tense, anxious, panicky, restless, frightened of some unknown, or may describe it in somatic terms. Symptoms such as butterflies in the stomach, pressure on the chest, palpitations, back pain or lump in the throat, are frequent expressions of anxiety. This feeling state when expressed through the autonomic nervous system can be observed as a sign by the physician. Expressions of anxiety in this manner may take the form of increased cardiac rate and pulse pressure, increased respiratory rate and depth, sighing respiration, moist palms, tremor, increased muscle tone usually in the back and neck, tightness of the jaw, excessive blinking, frequency of voiding, hyperperistalsis and numerous other manifestations. In taking the history the practicing physician may note changes in the rate of speech, the relaxed or tense posture of the patient, as well as the state of alertness. The patient's statements together with the physician's observations will lead to an accurate opinion of the level of the anxiety in the patient.

2. Affect (Is It Appropriate?)

Affect is the feeling tone or pain-pleasure accompaniment of an idea which is experienced by the patient. An affect is distinguished from an emotion. Emotion is the bodily or physiologic expression of the feeling tone or affect, for example, laughing, sighing, flushing or crying. Mood refers to a sustained constant affective state and must have a considerable duration. The affect is sensed in the patient by the observing physician. Affect may be described in terms of being dull, lacking, flattened, labile, elated or ecstatic. In terms of unpleasant affects one uses such terms as feeling blue, hopeless, depressed or suicidal. The most important aspect of affect for diagnostic purposes is whether it is appropriate to the idea which is being expressed. One might refer to inappropriate affect as being wierd, unusual, different or silly. A patient speaking of his father's death in a jovial way is an example of inappropriateness or altered affect.[1]

3. Thinking (Is It Logical and Realistic?)

Thinking may be disturbed in its form, progression or content. In the normal, thought flow is realistic, rational and conscious. It appears logical to the observer and can be understood and followed.

The progress of thought may be unusually slow, lack spontaneity or, in the other extreme, may be so rapid that it continues without ever stopping or ending. When continuous speech takes place with little or no direction, it is referred to as rambling or a flight of ideas. Words frequently used to describe abnormal progress in thinking have been circumstantial, retardation, perseveration, incoherence and blocking.

The content of thought is judged on its appropriateness to the situation. Abnormal content may be illustrated by preoccupation of certain ideas, delusions, hypochondrical thoughts, obsessions, phobias and hallucinations; as illustrated by a patient who talks only about her headache the day after her husband's desertion.

"Reality testing" is a concept closely tied to the thinking process. Reality testing refers to the patient's ability to comprehend and act appropriately to his environment. For example, he should recognize that he is in a physician's office or hospital and act appropriately. He should accept the physician as a friend and not consider him as an enemy who is going to do him bodily harm.

4. Sensorium (Is the Brain Functioning Clearly?)

Sensorium includes consciousness, orientation, and mental abilities. With respect to consciousness the patient's clear mindedness, awareness and alertness are considered. Orientation is usually considered in three spheres: person, place and time. Time may be evaluated in terms of day, month, year but also time of day, or time until the next meal. Mental abilities refer to the patient's ability to remember recent and past events, to read material and handle mathematical problems at his usual level, to interpret proverbs and to function normally on his job.

5. Behavior (Is It Consistent With the Patient's Group?)

Behavior is considered in the mental status to be overt gross behavior. For example, has the patient been arrested frequently, performed uncalled for or unusual acts, responded differently than did others to the same employers, or has his behavior been dominated by aggressiveness, hostility, passiveness, dependency, alcohol or drugs?

In defining each of these five categories it may appear that the mental status examination is an overwhelming burden to the practicing physician. The details of each group are given in order to present the concept as used in psychiatry. It is obvious that few psychiatrists, except when necessary in a particular patient, would ask a proverb or ask the patient to do a mathematical problem. These examples are given here to relate the type of information considered under the category of sensorium. It is believed that after a five or 10 minute history from a patient, physicians can give a reliable and satisfactory statement about each of the five categories.

Diagnosis

The rationale for dividing the mental status examination and observations into these five areas is to relate the observations to the diagnosis.

For convenience the following four broad categories of diagnosis are used. The distinction between categories is not always clear but nevertheless has been found useful.

1. *Psychoneurosis.*—The patient who shows excessive anxiety with little or no abnormality in the other four areas is considered a psychoneurotic. These patients on occasion have changes in affect or mood from that of being depressed to being elated; however, this mood is appropriate to their life situation and is compatible with the diagnosis of neurosis.

2. *Psychosis.*—A patient whose affect is abnormal in that it is not appropriate to their life situation or thought and also has a disturbance of thinking and reality testing is considered psychotic. A psychotic patient may have some variation from the normal in their anxiety level and their behavior may be affected by their thinking process but these abnormalities are secondary to their gross thinking and affective abnormalitis. The variations in anxiety and behavior are much less striking than the disturbance in thinking, affect and reality testing.

3. *Organic Brain Syndrome.*—The patient who has a defect in his sensorium (orientation and mental abilities) has an organic brain impairment. As a result of their organic brain impairment they may have some changes in appearance, anxiety, affect, thinking and behavior but all of these are much less striking than their loss of orientation and ability to think. This is especially important when considering a patient in the emergency room who has just suffered head trauma. If his sensorium is clear and his actions abnormal, then appropriate psychiatric care must be instituted. If his sensorium is abnormal along with abnormal actions then appropriate neurosurgical care must be instituted.

4. *Personality Disorders.*—A patient whose behavior is abnormal is considered a personality disorder. A patient with a personality disorder

has essentially normal findings in the areas of anxiety, affect, thinking and sensorium.

Please note table 1 which illustrates the association between the diagnostic category and the abnormal area of mental status.

TABLE 1

ABNORMAL AREA OF MENTAL STATUS AND DIAGNOSTIC CATALOGING

Abnormal Area of Mental Status	*Evidence of Abnormality*	*Diagnostic Category*
Anxiety	Level?	Psychoneurotic Disorder
Affect Thinking	Appropriate? Logical and realistic?	Psychotic Disorder
Sensorium	Oriented and clear?	Organic Brain Syndrome
Behavior	Normal for group?	Personality Disorder

DEFINITION OF TERMS

The diagnostic terms as used in this article are defined in the *American Psychiatric Association Manual*[2] as follow:

Psychoneurotic Disorders.—The chief characteristic of these disorders is anxiety which may be directly felt and expressed or which may be unconsciously and automatically controlled by the utilization of various psychologic defense mechanism. In contrast to those with psychosis, patients with psychoneurotic disorders do not exhibit gross distortion or falsification of external reality and they do not present gross disorganization of the personality.

Psychotic Disorders.—These disorders are characterized by a varying degree of personality disintegration and failure to test and evaluate correctly external reality in various spheres. In addition, individuals with these disorders fail in their ability to relate themselves effectively to other people or to their own work.

Organic Brain Syndrome.—This syndrome is the result of diffuse impairment of brain tissue function, such as is present in alcoholic intoxication, delirium, syphilis or trauma.

Personality Disorders.—These disorders are characterized by developmental defects or pathologic trends in the personality structure, with minimal subjective anxiety and little or no sense of distress. In most instances, the disorder is manifested by a life-long pattern of action or behavior, rather than by mental or emotional symptoms.

SUMMARY

A shorthand practical mental status examination which is useful to the practicing physician is described. Addendum: "To know what kind of a person has a disease is as essential as to know what kind of a disease a person has."[3]

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A New Mental Responsibility Law for Missouri

MEDICAL ASPECTS

ANY LAW concerning mental responsibility for crime should strive to accommodate two divergent but not irreconcilable aims: (1) protection of the individual from punishment and undue deprivation for acts over which he has no substantial control because of mental illness, and (2) protection of society from the antisocial, destructive behavior of the individual whether he is capable of controlling his behavior or not.

The Mental Responsibility Law which became effective on Oct. 13, 1963, is discussed from the medical standpoint by Dr. Haddock and from the legal phase by Mr. Richardson and Mr. Simeone.

Dr. Haddock is a member of the State Mental Health Commission and a member of MSMA Committee on Mental Health. Mr. Richardson is an Attorney at Law and Mr. Simeone is a Professor in St. Louis University School of Law.

This discussion was presented originally at a joint meeting of the West Central Missouri Medical Society and the Vernon County Bar Association at Nevada, Mo. on June 13, 1963.

Heretofore Missouri's criminal code has been both inadequate and inconsistent in fulfilling these aims of forensic psychiatry and modern jurisprudence. Now Missouri has a new mental responsibility law, enacted by the 72nd General Assembly, signed into law by the Governor on August 19, 1963, and put into effect on October 13, 1963. Missouri citizens in general and those interested in mental health progress in particular should be grateful for this effort aimed at liberalizing and humanizing our laws regarding the mentally ill. Most of those who have studied this new law are hopeful that it will provide a just and consistent plan for the protection of the mentally ill individual as well as for society at large. Actual experience in the courts over a period of years will be necessary to determine the extent to which it fulfills these expectations.

As with most states Missouri's test of mental responsibility in criminal cases has been based on the M'Naghten rules laid down in England in 1843. Briefly stated these rules provide that a person is not mentally responsible if he had such a defect of reason or disease of mind as not to know the nature and quality of the act he was doing, or if he did know it, not to know that what he was doing was wrong. This test, adopted several decades before the founder of the modern psychiatric era, Emil Kraepelin, had begun to bring order out of chaos in delineating and classifying mental illness, has been criticized as being too restrictive as well as being anachronistic in terms of contemporary views regarding mental disease. The restrictiveness resulting from the use of the word "know" poses a problem for the conscientious clinician since so often the intellectual functioning of the mentally ill person may be largely unimpaired. As a consequence the statement has been made that literally interpreted the M'Naghten test would exclude only the idiot, the grossly demented senile and the severely delirious person from responsibility.

Numerous attempts at revising and modernizing mental responsibility laws have occurred in this country in the last century. In 1870 New Hampshire adopted a rule that simply stated that an accused is not mentally responsible if at the time of the act he did not have "mental capacity to entertain a criminal intent." Although this test liberalizes the definition of mental responsibility and embodies the legal concept that it is the intent and not the act which establishes guilt, it has not gained wide usage. In 1886 the "irresistible impulse" test was first used in Alabama, but the basic soundness of this concept has been seriously questioned. A more recent modification has come from the Durham decision in the District of Columbia in 1954. It states that there is no responsibility if the unlawful act is the "product of mental disease or defect." Some psychiatrists have hailed this decision as a great advance, while some legal experts consider it too sweeping in its application. Its usage has not become wide-spread. In 1958 a Model Penal Code with a new definition of mental responsibility was proposed by the American Law Institute. This proposal has received serious consideration in many states and, as will be seen later, has formed the basis for Missouri's new test of responsibility. The Currens decision handed down in 1961 provides that the person is not responsible if, as a result of mental disease or defect, he lacked substantial capacity to conform his conduct to the requirements of the law which he is alleged to have violated.

Difficulties of the Medical Witness

Any test of mental responsibility is only as useful as the person or persons interpreting it will allow it to be. Thus, a person with strong preconceptions of the role free will plays in human behavior will tend toward an exacting, harsh interpretation of mental responsibility in the accused. In contrast, a person more oriented toward a deterministic view of human behavior with its emphasis on motivation and unconscious conflict would be more inclined to hold a large number of accused as not mentally responsible. In addition to these individual attitudes one must reckon with the changing views of society toward crime, mental illness and punishment from decade to decade and generation to generation. Though in general these attitudes are more and more toward greater leniency and tolerance, one can discern cyclic fluctuations in communities from time to time.

With this as a background, the role of the medical witness may be a difficult one. In most instances the physician, and particularly the psychiatrist, has been engaged a great deal of the time in offering relief from suffering, treating disability and fostering rehabilitation in the disturbed and disordered. His inclination will be to be most concerned with abnormal motivation, pathologic processes and potentialities for recovery. Aligning his feelings and attitudes in this manner, he may find it difficult to hold the person entirely responsible. A considerable segment of the public may reinforce this tendency, and in some instances may influence the physician unduly with pleas of a sentimental and unrealistic nature.

At the opposite pole will be found many forces influencing the physician toward a more punitive and exacting role. A wave of community feeling demanding retribution is not uncommon with some criminal cases and everyone involved may be engulfed by it. In these instances it may be easier to side with those forces demanding punishment than to do otherwise. Within the individual physician himself anxiety and hostility may be aroused to the point that he may feel impelled to express his contempt for the accused in the form of a medical judgement.

Caught between these crossfires, particularly when accentuated by the adversary method, the physician must attempt to adhere to well-established, objective guidelines. His designation as a neutral witness may aid this, but will not assure freedom from prejudiced demands being made upon him. His foremost duty is to determine the presence or absence of mental illness. Using the same criteria as he would in cases confronting him in his daily practice it should be possible to present an accurate description of the illness. The effects of the illness on the person's behavior, and particularly on the behavior involved in the criminal act, should be determined. When these observations are completed one can proceed to formulate a reasonable answer to the legal question of the individual's mental responsibility.

Important Features of New Law

Missouri's new law is an attempt to provide a consistent, enlightened method of determining the presence or absence of mental responsibility in those accused of a crime. If found mentally responsible the accused will be tried. If found mentally not responsible the accused will be committed to a mental hospital for care and treatment. In either case society will be protected. As a result it is hoped that the plea of mentally not responsible ("insanity plea") will no longer be regarded in some instances as a ruse for circumventing justice. Instead, it is hoped that public confidence in forensic medicine's contribution to legal procedures will be strengthened.

In order to provide the appropriate criteria for the evaluation of the mental state of the accused or convicted person at various stages of the criminal process a progressive series of definitions geared to fit each step is set forth. Out of these definitions and the recommendations that follow is developed a consistent plan for handling the mentally ill person accused or convicted of a crime. It is important for the physician to appreciate the significance of each of these steps and definitions.

Early in the criminal process it may be apparent that the accused is so grossly disordered mentally at this time that he cannot even assist in the preparation of his defense. To screen out these individuals the new law provides that "no person who as a result of mental disease or defect lacks capacity to understand the proceedings against him or to assist in his own defense shall be tried, convicted or sentenced."

When the accused comes to trial the most important application of the concept of mental responsibility occurs. It is here that the new test of mental responsibility replacing the M'Naghten rules of 1843 is applied. It provides that "a person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he did not know or appreciate the nature, quality or wrongfulness of his conduct, or was incapable of conforming his conduct to the requirements of law." It should be noted that this state of mental irresponsibility must be established as having existed at the time the alleged crime was committed. Essentially this new test contains all of the elements of the M'Naghten rules, but broadens them with the word "appreciate" and the phrase "incapable of conforming." Though this may not at first sight appear to be a substantial change, it is nonetheless crucial in that it takes cognizance of the changes wrought in the emotional and volitional parts of the personality when the person is mentally ill. The concept of incapability of conforming conduct is much broader and yet more accurate than the questionable irresistible impulse test.

If the person is declared mentally not responsible, he is automatically committed to a mental hospital for care and treatment. After a period of time changes of a spontaneous nature or as a result of treatment may occur. Persons acting on behalf of the committed person or the hospital may institute proceedings for his release. A hearing will be held in the court from which the original commitment was made. The concern at this time is the safety of the public as well as the welfare of the individual. Therefore the question is whether he still has or in the reasonable future is likely to have "a mental disease or defect rendering him dangerous to the safety of himself or others or unable to conform his conduct to the requirements of the law."

Among those persons convicted of crime, signs of mental disease may become manifest after he starts serving his sentence even though no evidence of this may have been present prior to conviction. Therefore provision is made for the inmate who is found to be mentally ill to be transferred to a mental hospital for care and treatment. When and if he recovers he will be returned to prison to complete his sentence, or if his sentence has expired while hospitalized his discharge will be considered.

Those persons condemned to death may develop mental illness during the interval between conviction and execution. If "as a result of mental disease or defect he lacks the capacity to understand the nature and purpose of the punishment about to be imposed upon him or to recollect matters in extenuation, arguments for executive clemency, or reasons why the sentence should not be carried out" he shall not be executed and care and treatment in a mental hospital ordered. If recovery occurs he will be returned to prison and the execution carried out.

Diagnostic Considerations

Attempting to relate what is essentially a legal definition to a diagnostic classification which has been derived from clinical experience presents obvious difficulties. Yet the fact that Missouri's new definition of mental responsibility clearly demands a definite diagnosis would make such an attempt important. Just as one cannot treat patients on the basis of rules of thumb, neither can one stamp accused persons as mentally responsible or not responsible according to diagnostic label only. In the past the tendency to equate the legal term "insanity" with the medical term "psychosis" has led to the unfortunate and inaccurate practice of considering all persons with psychoses to be mentally not responsible. Actually many persons with psychoses can be considered mentally responsible. With these points in mind one can approach the matter of diagnosis and its relationship to mental responsibility.

The psychoneurotic disorders would almost never be considered the basis for a declaration of mental irresponsibility. In some instances the presence of a neurotic disorder may be established for the purpose of mitigating the punishment, but this is a matter different from exclusion from mental responsibility.

The conditions usually termed psychopathic, sociopathic or character disorders present more of a problem. They are especially important since their very nature leads to frequent infractions of the law. Missouri's new law specifically states that those individuals whose only evidence of mental disease or defect is the presence of "repeated criminal or otherwise antisocial conduct" would not be considered to have a mental disease or defect and therefore would be held mentally responsible. This in itself would result in many psychopathic personalities being held responsible. But the use of the qualifying word "only" in this definition allows many psychopathic personalities who have manifestations other than repeated criminal conduct to be considered for exclusion from responsibility. Yet even in those cases many would be held responsible. It is possible that in some instances the severely disordered psychopathic personality would be considered mentally not responsible. Those psychopathic disorders manifested by sexual offenses fall under the Criminal Sexual Psychopath Law of 1959.

Addiction, including alcoholism, would not in itself be the basis for exclusion from responsibility. However since it is known that in many instances addiction merely masks the underlying mental disorder the latter might be the basis for exclusion from responsibility if it meets the criteria outlined in Missouri's new law.

Mental retardation or deficiency in its more severe forms, such as those classified as idiots and imbeciles and usually having an IQ below 50, would most likely be excluded from responsibility. The less severe forms (morons, borderline deficients) would most likely be held responsible.

The functional psychoses refer mainly to the schizophrenic disorders and the affective disorders. The schizophrenic disturbances constitute a frequent basis for exclusion from responsibility. Those cases in which delusions and distortions of reality substantially affect the person's behavior in connection with the criminal act would certainly be likely candidates for exclusion from responsibility. The affective disorders are less often involved in questions of mental responsibility. In its milder form, whether a depression or a hypomanic state, it would usually not result in exclusion from responsibility. More severe forms of depression as well as a frank manic disturbance could distort behavior enough to warrant exclusion from responsibility.

The organic psychoses most commonly result from such conditions as cerebral arteriosclerosis, brain trauma, general paresis, toxic conditions, brain tumor and epilepsy. In any of these instances the production of confusion and misinterpretation of reality might account for the abnormal behavior to such an extent that responsibility would be excluded.

THE PHYSICIAN'S RESPONSIBILITY

The new law provides for appointment of a physician or physicians by the court to conduct an examination and submit a report. The physician is thereby cast in the neutral role with which he is most familiar. It should encourage a more objective type of clinical evaluation. When his report is presented to the court it may be accepted by all concerned. However, if either the prosecution or the defense objects, they may request an examination of their own. The adversary method is thereby invoked, and medical witnesses brought in under it will be subject to the stresses inherent in that method. It is well, though, that provision for differences of opinion to be expressed should be made. Our heritage of freedom and individual rights demands this even when medical testimony is involved, and well it should.

The type of examination to be conducted will depend somewhat on the examiner and the particular circumstances. Ideally hospitalization for a period of two weeks or more, in order to permit better observation and detailed examination, would be desirable. However this may not be feasible, in which case an office type examination will have to be carried out. In any event the examination should be carried out in private. The basic data will still, in most instances, be obtained by history, physical (including neurologic) examination, and mental status examination. If there is evidence or suspicion of organic factors, procedures such as skull films, spinal fluid examination and electroencephalographic tracings should be carried out. However, it is to be regretted if medical reports should flaunt such scientifically impressive methods before legal and lay audiences if they are not really contributory. In some instances additional historical information from relatives and others may be important and should be obtained. It should be noted that evidence obtained from sources other than the accused may be ruled hearsay evidence in court, and the examiner should be prepared to present observations obtained directly from his examination of the accused in order to establish his diagnosis. Psychologic tests are of decisive importance only in determining the level of intelligence, thereby establishing mental deficiency. Other psychologic tests, including projective tests, should be regarded as contributory only and not conclusive.

Once the examination has been completed a report for use by the court, the prosecution and the defense should be composed. That this report is not to be made public should dignify the whole procedure. Lengthy compositions with emphasis on psychiatric and medical terminology may be more confusing than otherwise. A summary of the positive findings and their significance presented in reasonably simple terms would be of most value. A diagnosis with qualifications regarding severity, chronicity and prognosis should be offered. Speculative formulations attempting to establish theoretical explanations for criminal behavior in general, especially on the basis of unconfirmed psychodynamic concepts, should be avoided. Finally, an opinion should be offered regarding the individual's mental capacity as defined under Missouri's new law. Some have argued that the physician should not be asked to offer an opinion about the individual's mental responsibility, but merely submit the data he has obtained. As a citizen equipped with special knowledge with which to evaluate more fully the moral and social implications of this problem it is my belief that the physician has a responsibility to express his opinion. The final decision will nevertheless rest with the judge and jury.

Résumé

Missouri has a new mental responsibility law which provides for a consistent, enlightened method of handling persons accused of crime who are mentally ill. Provisions for separate criteria for assessing mental illness and responsibility during the pre-trial period, during trial, after hospitalization, while serving a prison term and while awaiting execution are included. Most important to the physician called upon to offer expert opinion is a new test of mental responsibility replacing the M'Naghten test of 1843. A description of the implications of this law for the medical witness and for the mentally ill person is given.

LEGAL ASPECTS

A Sane Law for the Criminally "Insane" in Missouri

On October 13, 1963, Missouri's new Mental Responsibility Law became effective. It establishes a new test for mental responsibility in criminal cases in this state, but that is one of the least of its accomplishments. The new act repeals a number of statutes, some of which have been in effect since 1835. It codifies and reduces to writing much of the prior common law, and modifies the M'Naghten or right-wrong test of "insanity" adopted in England in 1843 and followed in Missouri since that time. It replaces outmoded and archaic concepts of law and psychiatry with modern ones. Each substantive provision is implemented with the best of procedural tools known in law. The act is, in short, a comprehensive group of statutes declaring the rights, duties and disabilities of mentally disabled persons at every stage of the criminal process from arrest until execution. There is nothing like it, in terms of inclusiveness and modernity, in any other state.

This new law is of interest to all physicians and not just those few who of necessity or by choice engage in forensic psychiatry. In the first place, the law of mental responsibility in criminal cases is a rather good example of the communication, or lack of it, between law and medicine. Secondly, that same law is a fair index of how receptive the legislature is to suggestions for reform both by the legal profession and by the behavioral and other sciences. Thirdly, that law is one of the best places known in which new ideas and procedures, such as impartial expert testimony, may be tested for their general application to other fields of the law. Finally, this law is a matter of interest because it reflects a wide variety of philosophical, ethical, moral, religious and other notions prevailing in the community at large.

Thus, it involves, either explicitly or otherwise, consideration of capital punishment, free will versus determinism, the place of "intent" and the "guilty mind" in the definition of crime, the legitimacy of such goals of punishment as retribution, revenge and the infliction of suffering, the reasons why society is willing or unwilling to punish some but not all "insane" persons, the efficacy of mental hospital treatment or punishment of sociopaths, the constitutionality of compulsory physical and mental examinations of those accused of crime, the desirability of "impartial expert testimony," the competency of psychologists and general practitioners to testify about mental disease, defect and responsibility, the necessity and importance to the indigent accused of obtaining "discovery," i.e., methods of procuring evidence needed at trial, the desirability and methods of providing for the payment of the costs of court-appointed medical and psychiatric examiners, witnesses and treatment in state hospitals, the elimination of surprise by requiring the accused to plead mental irresponsibility in advance of trial, the fixation and definition of the burden of proof, the respective roles of the expert, judge and jury in criminal cases, the constitutionality of automatic, compulsory commitment of defendants acquitted because of "insanity," the proper conditions for and participants in the decision of whether to release such a person from a state mental hospital, methods of dealing with persons who become mentally ill after conviction and while imprisoned for a term of years or while awaiting execution.

The purpose of this paper is to explain the most important features of the new law and the reasons why change was necessary. Those matters of particular concern to the medical profession will be emphasized. No useful purpose could be served in reviewing at length either the old law or the alternative choices available to and rejected by the legislature. However, something will be said about the desirable and expectable law of the future. This paper will be in three parts: (1) a critical exposition of the old law and the new, (2) a discussion of those features of the new law of interest to the medical profession, and (3) suggestions for further changes and reform.

I. The Old Law and the New

1. Section 1 (R.S.Mo. 1959, section 552.010). Definition of mental disease or defect.

Prior statutes and common law used the word "insanity" indiscriminately for all situations in which mental disability became pertinent. It is a word with elusive and protean meanings, both in law and medicine. In the criminal law its use has worked much injustice because it has been misunderstood by laymen or juries.

The new law abandons this word and substitutes for it the phrase "mental disease or defect," which appears throughout the act as a preliminarily required finding in determining whether the accused is fit to stand trial, was responsible for the offense charged or should be executed. Section 552.010 states that the phrase includes conditions of congenital or traumatic origin but excludes "abnormalities manifested only by repeated criminal or other antisocial conduct" or "manifested only by criminal sexual psychopathy." Thus, sexual and other sociopathy are arbitrarily excluded from "mental disease or defect," however questionable this may be in psychiatry, but only where there is no other evidence of mental disease or defect present.

Several comments seem justified. No attempt has been made to lay down everything that "mental disease or defect" includes or means. It may be argued with some merit that this phrase is almost as vague as the old word "insanity." The answer is that the chief fault with the word "insanity" was its misconceptions and distorted connotations rather than its vagueness. Some vagueness is unavoidable and may even be desirable.

The exclusion of sociopaths might be highly objectionable if all were deprived of the benefit of the act whether or not suffering from other abnormalities than repeated criminal or other antisocial conduct. The word "only" may be no great obstacle to the careful examiner since the "pure" sociopath (the modern word for "psychopath") may be a rarity. However, the legislature had undoubtedly created a real roadblock to any attempt to excuse criminal activity merely because it is habitual. The law is not ready to accept recidivism or antisocial conduct as sufficient evidence alone of mental illness to halt legal proceedings or to relieve the accused of legal responsibility for crime. This attitude is probably justified because (1) sociopathy is difficult to diagnose, (2) there is even some disagreement among psychiatrists as to whether it is a mental disease, (3) the sociopath is rarely treatable in the ordinary mental institution, and (4) a substantial number of habitual offenders are sociopaths who, if they cannot be effectively deterred, rehabilitated or treated, can at least be kept out of circulation for a while by confinement in a penal institution.

Alcoholism and drug addiction are usually symptomatic of an underlying personality disorder but may also be secondary to almost any other mental disorder. A substantial number of crimes are committed while under the influence of intoxicants or during the drug addict's periods of deprivation when he needs money to supply his habit. These conditions have never been recognized in Missouri and most other states as excuses for crime. Missouri and a minority have not even considered them as mitigating factors. Thus, voluntary intoxication to the point of amnesia will not reduce the offense of first degree murder to a lesser degree of homicide even though the accused was, because of alcohol, mentally incapable of deliberation or other mental states essential to the crime. The drunk is told that if he intended to drink, then the law will hold him responsible for anything that his intoxication then caused or permitted. Whether this is "just" need not be argued here. Jurists rationalize the law by saying that these rules are intended to prevent the commission of crime under the influence of alcohol. No one has ever substantiated that assumption and the probability is that it is not true. What jurists are probably afraid of is the inability of legal processes to deal with the individual offender who would claim that he is not legally accountable for his crime because he was intoxicated.

Closely related to the problems of alcohol and drug addiction are those arising from crime during psychomotor attacks of epilepsy or during "blackout spells," amnesic states or "automatism" occurring from mental disorders or, more troublesome, claimed to have occurred for one reason or another. Many such claims arise more from the desperate need for a defense than from anything else. Their existence at the time of a crime are extremely difficult to prove or disprove. About all that the law can do is to ask the psychiatric examiner to give his careful opinion upon the matter. It should be noted, however, that none of these claimed occurrences qualify for the excuses recognized in the act unless they are related to a "mental disease or defect" which the examiner can identify.

A final point requires emphasis. The law is not impressed with medical labels. Heretofore it has generally been thought that all psychotic persons are "insane" so far as the criminal law is concerned. That is not true. Those afflicted with involutional psychotic reaction or affective reactions (manic-depressive psychoses) seldom are involved in crime. Where mental disorder exists among offenders to such an extent that crime is a manifestation thereof, it will usually be found to be a psychosis classified as a schizophrenic or paranoid reaction. Even so—and here is the important point—although all persons suffering from psychoses, psychoneuroses, organic brain disorders, psychophysiologic disorders, mental deficiencies or personality disorders have a "mental disease or defect," not all crimes committed by these persons are related causally or otherwise to such disease or defect. All except a small fraction of such people, despite their mental disease or defect, do know or appreciate the nature, quality or wrongfulness of their conduct and are able, if they wish, to conform their conduct to the requirements of law. Most of them are mentally able to stand trial and are legally responsible under Section 552.030 which will be discussed later.

On the other hand, and this is equally important, some persons with clear and extreme psychoneuroses, deep personality disturbances, mental deficiencies, organic brain disorders or psychoses classified as involutional or affective reactions may commit crimes for which they may not, under the new Missouri law, be held responsible.

2. Section 2 (R.S.Mo. 1959, section 552.020). Mental disease or defect excluding fitness to proceed.

Subsection 1 provides that "no person who as a result of mental disease or defect lacks capacity to understand the proceedings against him or to assist in his own defense shall be tried, convicted or sentenced for the commission of an offense so long as the incapacity endures." This follows court-declared, common law well established in Missouri and elsewhere. No prior Missouri statute ever covered the subject, however.

The most interesting features of this section of the new law are covered by the other five subsections which deal with the procedure needed to make the substantive test effective. Under the old law, passed in 1883 and never changed until now, a separate jury trial was to be held of a defendant's "insanity" where he "became insane" after his indictment and before trial. No psychiatric examination could be ordered on behalf of the state and if the accused was indigent he could not even have one himself. If the jury found him presently "insane" he was sent to a hospital until he was "restored to reason." It was possible, of course, for him to be confined for life though innocent of the crime. It was possible for him to be "restored to reason" years later only to find his witnesses lost or dead. Worst of all, the only person who had the power to find him "restored" was the head of the hospital whose judgment was final.

Under the old law, if the accused "became insane" before he was indicted or if he claimed "insanity" at the time of the crime no separate trial of his fitness to proceed was had. The same jury which tried the crime and the "insanity" defense first decided those issues. If it acquitted because of "insanity" at the time of the crime it was then required to find whether he was "entirely and permanently recovered" from his "insanity." If it was so found, the accused walked out of court a free man. If not so found he was sent to a mental hospital until restored to reason. The statutes provided no procedure for his release or the trial of his right to be released. The opinion of the head of the hospital was final and non-reviewable.

Many changes are to be noted in the new law: (1) the availability of procedures testing fitness to stand trial, even though the accused may have "become insane" before the indictment, (2) the provisions for court-appointed, impartial examiners and for their remuneration, (3) the distribution of copies of reports to both sides of the case, (4) the access to further examinations by physicians chosen by the state or accused, (5) the possibility that a report will be accepted, thus eliminating a court hearing, (6) the substitution of a judge for a jury when hearings on fitness-to-proceed are necessary, (7) avoidance of trials for crimes after long delays due to confinement in a mental hospital, (8) the provisions for a trial in court after a period of confinement of the accused's recovery sufficient to stand trial, (9) the veil of secrecy thrown over the reports of doctors so far as the public is concerned, (10) the protection of the accused's privilege against self-incrimination, thus encouraging free communication with the examiner.

Some question may be raised by the choice of the word "physician" instead of "psychiatrist" as the person to make examinations. The vast majority appointed will probably be psychiatrists. However, where it would be costly to bring a psychiatrist a considerable distance to the place of examination or testifying, a qualified physician, though not a psychiatrist, will serve the law's purposes. In fact, it may well be argued by some people that the act should have permitted psychologists to be appointed. Some psychologists may be qualified to reach the conclusions necessary in some cases under the law. Where the chief issue is mental deficiency it can be ascertained rather readily by intelligence tests alone. Projective tests, such as the Thematic Apperception Test (TAT) and the Rorschach Test, on the other hand, are diagnostic tools which require a substantial element of subjective interpretation and a thorough knowledge of mental disease. Nevertheless, several courts outside Missouri have ruled that psychologists may be qualified to testify to mental status and responsibility. The drafters of Missouri's new law evidently thought that because psychologists are not licensed or regulated in Missouri they should not be appointed to make the examinations and reports required in criminal cases where a man's life or liberty are at stake. It goes without saying that psychological testing will be a valuable adjunct in many cases to a complete psychiatric examination.

3. Section 3 (R.S.Mo. 1959, section 552.030). Mental disease or defect excluding responsibility and proceedings relating thereto.

Subsection 1 provides that "a person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he did not know or appreciate the nature, quality or wrongfulness of his conduct or was incapable of conforming his conduct to the requirements of law." It is inaccurate to say that this new test is merely the old M'Naghten Rules with the irresistible impulse test as an alternative. The word "appreciate" did not appear in the M'Naghten Rules. The word means "give value to," so that if an accused person knows what he is doing but does not evaluate his act properly in the context of circumstances under which it is committed, he should not be held responsible. The word "wrongfulness" requires an accused to know or appreciate that his conduct is morally as well as legally wrong. Thus, a person who kills another, knowing that it is legally wrong but under a delusion that he is commanded by God to commit the act, does not "appreciate" the "wrongfulness" of his conduct. The alternative test relating to capacity to conform one's conduct to the requirements of law is not an equivalent of the old irresistible impulse test, since it must be shown under the new law that the entire personality structure of the individual was so affected by mental disease or defect that he could not generally conform his conduct to the requirements of law. It will not be enough for him to say, as he could under the irresistible impulse test, that he just could not resist the impulse to pull the trigger. The new test is substantially the same as that recommended by the American Law Institute in its Model Penal Code. It has also been adopted in substance in Vermont (1959) and Illinois (1961). Quite obviously it does not go nearly as far as would be required under the Durham rule, under which no more need be shown than that the crime was the product of mental disease or defect.

Under the law of Missouri prior to the new act the accused could not be excused from his conduct unless his cognitive functions were so badly disordered that he did not know the difference between right and wrong. Few people could qualify under that test. Many obviously insane persons in mental hospitals know the difference between right and wrong and can follow instructions of their attendants. Under the old law mental disorders affecting volitional and emotional controls were no defense to crime.

Perhaps the most significant aspects of this section of the new law are those subsections dealing with the procedure necessary to make a substantive test effective. The accused is required to give notice to the state of his intention to raise this defense. There was no such requirement under the old law. Under the new act where the defense has been pleaded, either the state or the defendant is entitled to an examination and report by a court-appointed impartial physician. The examination may be made in a hospital. Statements during the course of any such examination may not be admitted in evidence on the issue of guilt but may be admitted on the issue of his mental condition, provided, however, that the court must instruct the jury in no uncertain terms that such evidence may not be considered on the issue of guilt. Both the accused and the state are entitled to an order granting an examination by a physician of their own choosing, in addition to the examination by a court-appointed expert.

Subsection 5 creates a presumption of sanity whether the accused was previously adjudicated insane or not. It also casts the burden of proof of "insanity" upon the defendant and requires that it be established by a preponderance of the evidence, as distinguished from the heavy burden of proof carried by the state in criminal cases of showing guilt beyond a reasonable doubt. Any verdict acquitting on the ground of mental disease or defect excluding responsibility must so state.

Subsection 3 introduces new and quite important law into Missouri. This subsection provides that evidence of the existence or absence of a mental disease or defect shall be admissible "(1) to prove that the defendant did or did not have a state of mind which is an element of the offense, or (2) for the purpose of determining whether or not the defendant, if found guilty of a capital offense, shall be sentenced to death or life imprisonment." Thus, if the mind of a person accused of first degree murder is so diseased or defective that he cannot "deliberate," a necessary ingredient of that offense, the court or jury may acquit him of that charge and yet find him guilty of second degree murder or manslaughter, in which "deliberation" need not be shown by the state. This rule is known as the "doctrine of partial responsibility" which has long been the law of Scotland and which was adopted by the English Homicide Act of 1957. It is also the law of a substantial number of states in this country, although previously rejected in Missouri. It has been recommended by the American Law Institute in its Model Penal Code. This doctrine or rule of law is quite logically justifiable since, if the law does recognize degrees of responsibility in homicide, then it should recognize the psychiatric truth that there are degrees of mental incapacity. One of the chief complaints made against the old M'Naghten Rules was the fact that they converted the trial into an "all-or-nothing" gamble with the accused's life at stake. For "insanity" to be a defense it was necessary to show total incapacity.

Subsection 3 also permits the jury to consider evidence of mental disease or defect in capital cases in which the jury must determine whether the accused should be sentenced to death or to life imprisonment. Thus, an accused found mentally capable of first degree murder may yet have a mental disease or defect of such a nature that his death would not deter others from similar offenses. Yet, his imprisonment might serve other goals of punishment thought desirable by society, such as isolation, rehabilitation or even retribution. Incidentally, it may be remembered that one of America's greatest scholars, Jacques Barzun, opposes the abolition of capital punishment because he believes that life imprisonment is cruel and inhumane.

It should be mentioned that although Missouri courts in the past refused to adopt irresistible impulse as a defense in the criminal law, they did recognize that what is known as "irresistible impulse" may convert what would otherwise be a sane suicide in the civil law relating to insurance and workmen's compensation cases into an "accident."

4. Section 4. (R.S.Mo. 1959, section 552.040). Procedures after acquittal because of mental incompetency excluding responsibility.

This section provides that any person acquitted for lack of mental responsibility must automatically be committed to a mental institution for care and treatment, subject to release only when found both no longer dangerous to himself or others and able to conform his conduct to the requirements of law. A release may be either conditional or unconditional, as is true in civil cases. Due process of law is accorded the confined person by establishing procedures permitting either him or the state to test in court his right to release. Adequate measures are established to prevent nuisance reapplications for release at frequent intervals. The old law was wholly inadequate and unsatisfactory. As explained previously, if a jury acquitted on the ground of "insanity," it was required further to state in its verdict whether the accused had "entirely and permanently recovered from such insanity." If so, he was to be discharged. If not, he was to be confined in a state hospital, but there were no procedures whatsoever set up to test his right to release from the state hospital after treatment and recovery. Furthermore, the head of the hospital was the only person who had a right to say whether he should be released. This obviously put an enormous responsibility upon the head of the hospital.

Provisions for the automatic commitment of an accused acquitted on account of "insanity" exist in the law of other states and have been held constitutional. It was unrealistic under the old law to ask a jury to determine what is essentially a medical question, i.e., whether the accused at the time of trial could be released into society without danger to himself or others. The natural disposition of almost all juries was to find the accused still "insane," although an occasional jury would release an accused on the ground that at the time of the crime he was "temporarily insane." Heads of Missouri state mental hospitals particularly welcome those features in the new law requiring the court to participate in the decision as to whether an accused should be released from a mental institution. It should be mentioned, however, that the act does provide that if the head of the hospital and the prosecuting attorney are satisfied that the accused should be released, then no court hearing need be held. This again will effect a considerable saving of time of pyschiatrists at state hospitals who, under the old law, were frequently required to devote much time and expense to attendance in court. Of course, if there is no agreement as to the release of the accused, then a court hearing must be held.

5. Section 5 (R.S.Mo. 1959, section 552.050). Mental illness during service of sentence or before execution and proceedings relating thereto.

This section incorporates previous statutes providing for the transfer to a mental institution for care and treatment of those persons found in prison to be suffering from a mental illness. These laws were passed in 1959 and were entirely adequate. They were brought into the present act for the sake of completeness.

6. Section 6 (R.S.Mo. 1959, section 552.060). Mental disease or defect upon sentence to death.

This section provides in effect that no person suffering from a mental disease or defect of a nature that would make his execution inhumane shall be put to death while so afflicted. Interim custody and care is supplied until the accused no longer suffers such disease or defect. He may then be put to death.

The new act repeals old statutes which had been on the books since 1835. Under the old statutes any warden who had reason to believe that a convict under sentence of death had "become insane" could summon a jury of "twelve competent jurors to inquire into such insanity." There was no clue given as to where these jurors should be obtained, and they might, indeed, be twelve prison guards. The statute did not provide for any place or judge before whom the issue of "insanity" was to be tried. The new law not only establishes acceptable tests of fitness for execution, but supplies the procedure necessary to make the tests effective.

7. Section 7 (R.S.Mo. 1959, section 552.070). Power of Governor to grant reprieves, commutations and pardons.

Section 7 establishes something entirely new in Missouri, although it has been tried in several other jurisdictions and in practical effect exists in England. Under the new act the Governor has power to appoint a Board of Inquiry to assist him in gathering facts and in reaching a conclusion as to whether a person sentenced to death should have that sentence commuted to life imprisonment. Although the Governor has such a right under the Constitution, he had never been given assistance by a commission or Board of Inquiry. The terrific responsibility imposed upon him may well be visualized when one considers that at the time of the passage of this act there were eight or nine men in the penitentiary condemned to death. It was the Governor's duty alone to look them over and say which ones should live and which should go to death by the inhalation of gas. The Board of Inquiry which the act permits the Governor to appoint will undoubtedly be able to give him invaluable assistance in the exercise of his power of commutation and they will at least help bear with him the responsibility of selecting those to live and those to die.

8. Section 8 (R.S.Mo. 1959, section 552.080). Costs of procedures relating to persons in custody and having or suspected of having a mental disease, defect or illness.

A number of Missouri statutes relating to costs of treatment, transportation and such of mentally irresponsible persons caught in the processes of the criminal law have been repealed to eliminate inconsistencies, old and vague language and overlapping. The new act should result in recovery of more costs from the estates of mentally irresponsible persons capable of paying for them. In addition, the new act provides for payment of physicians appointed in the discharge of the necessary assistance they give in making examinations under appointment of court, and in testifying at a hearing or trial.

FEATURES OF THE NEW LAW OF MEDICAL INTEREST

A. Procedures.—The best features of the new act, from the viewpoints both of law and psychiatry, are the procedures adopted either to fill voids in the old law or to replace obsolete devices with modern machinery. Of special interest to the psychiatrist are: (1) provisions for court-appointed physicians and payment for their examinations and testimony; (2) opportunity for examination in hospitals; (3) the elimination of the necessity of court appearances where written reports are accepted by all parties concerned; (4) the substitution of a hearing before a judge instead of before a jury where social or moral judgments are not required, i.e., in determination of fitness to proceed or for execution or release after confinement; (5) allowing the appointed physician to make his examination in private without lawyers or others "helping" by their presence; and (6) those provisions shifting to the trial judge some of the responsibility formerly borne alone by the head of a state mental hospital of determining whether prisoners should be tried, released after acquittal or executed if found guilty and condemned to death.

B. The role of the physician.—Under the new law physicians will appear as examiners, consultants and witnesses. A court-appointed physician will be called "impartial" when the lawyers come to argue the case before the judge or jury. His testimony will unquestionably be given much more weight than the expert hired by one side or the other. This is so because the latter will be critically viewed as one who may have accepted employment after the litigants shopped around for a favorable witness. The privately employed expert may be regarded as a hireling who is testifying "for the state" or "for the defense." The source of his remuneration may affect the credence given his testimony, and will certainly be so regarded by some jurors. Finally, the perfectly frank witness will admit that most privately employed experts do have an unconscious bias in favor of the party calling them, however hard they may strive to be objective and impartial.

It must also be conceded that the concept of "impartiality" is illusory to a large extent even when the appointment is made by the court. All psychiatrists have underlying preconceptions, philosophical and moral values, and unconscious motivations which influence them in professional work and judgments. Nor will they be completely immune from the pressure of community feelings of sympathy or condemnation. Moreover, they will still encounter under the new Missouri law of mental responsibility many of the age-old dilemmas which have confronted law and psychiatry for years. Thus, the psychiatrist is inclined toward determinism whereas the law postulates free will. The psychiatrist is mostly concerned with treatment and rehabilitation of the individual, while law still regards retribution and deterrence of others as legitimate goals of the criminal process. The psychiatrist is interested in discovering the roots of the accused's mental disorder and crime; the law disregards them and fixes its attention solely on the criminal act and the accused's mental condition at that time. The psychiatrist seeks to understand the accused without condemning him morally; the law seeks a guilty mind and if it finds one regards it as an evil one which must be publicly censured and stigmatized as criminal.

These differences which have divided law and psychiatry and have prevented their free communication and cooperation have not been eliminated by the new act. Nor has the law done much to dispose of the long list of grievances which these two disciplines have compiled against one another. Some doctors will continue to refuse to participate in forensic matters and will give reasons at least satisfactory to themselves for not wanting to get mixed up in medico-legal cases. They need not be catalogued here, beyond mentioning the occasional professional and social criticism of "court testifiers," the disrupted office schedules and loss of time while waiting to be called or while attending court, the last-minute calls for examinations and testimony, the lack of opportunity to prepare oneself for testifying, the occasional naive, ignorant or lazy lawyer incapable of bringing out important matters at trial, the searching and infrequently abusive cross-examination, the feeling of frustration in attempting to answer "yes" or "no" to inartful questions calling for nonprofessional moral judgments which may be misunderstood by 12 lay jurors, the unpaid bills for examinations and testimony which pile up waiting for the final disposition of cases and often never paid at all, and so on.

Lawyers on the other hand will continue sharply to upbraid the medical profession for its withdrawal from participation in the responsible solution of community problems which affect physicians as well as others. They will reiterate all of their usual complaints: the failure to send in prompt reports and the inadequacies of many that are returned, the high prices demanded by doctors for examinations and testimony when they should know that in many cases the lawyer must foot the bill, the difficulty in getting the expert in court when needed and while the jury is waiting and blaming the lawyer, the doctors who forget the special procedures which distinguish medicolegal and clinical examinations, the incomprehensibility of medical jargon left unexplained in reports or testimony, the special privileges which some doctors seem to demand while on the witness stand, the unwarranted intrusion of the doctor into nonmedical phases of the case, his lack of preparation for appearances in court and unwillingness to consult with counsel before trial, and so on.

Mutual suspicion and criticism will undoubtedly continue under the new law as it has in the past. These are the familiar results, of course, of frustration, aggression, fear, selfishness and misunderstanding. They are unavoidable so long as the adversary system of law continues, under which most lawyers and some witnesses strive for results gratifying their personal desires rather than the justice of the case.

Despite this gloomy and depressing picture, all is not lost! Far from it. Under the new mental responsibility law the physician is cast in a far more satisfactory role than he was given before. His status as an impartial person has been improved. His judgments will be given more credence and weight in the final result. He will be able to testify more fully about his findings as they affect the total individual. His principal job will be to reach a careful decision regarding the mental condition of the accused. To that end he should and must resort to all of the methods of examination available to him and needed in the particular case. This may or may not include physical, laboratory and psychologic tests. He will try to forget, however difficult it may be, that his decisions may send an accused to death in a gas chamber. His reports will be as full and as accurate as possible since their acceptance by both parties may mean that no court hearing will be necessary. Where he relies upon hearsay, i.e., information from any hospital record, doctor, relative, friend, policeman or other source than the accused, he will carefully state that in his report, identifying such source and the information thus obtained. This will be necessary because if this hearsay information is not proved at trial the doctor's conclusion may be excluded unless he can reach a judgment independent of the hearsay. If the examiner can reach a conclusion independent of hearsay which merely verifies or substantiates his opinion he should say so in his report.

In the examiner's report and on the witness stand he must be as clear and factual as possible. He may be asked for his conclusions in the language of the act, and if he feels able to express such a conclusion it will be considered of great assistance to the court and the lawyers and may have a great influence on the jury. Thus, his report and testimony may include such opinions as these: "In my opinion and with reasonable medical certainty the accused at the time of the offense charged against him on July 1, 1963, was (was not) suffering from a mental disease or defect," or "in my opinion and with reasonable medical certainty the accused at the time of the offense charged against him on July 1, 1963, was (was not) suffering from a mental disease or defect and as a result did (did not) know or appreciate the nature, quality or wrongfulness of his conduct and (but) was (was not) capable (incapable) of conforming his conduct to the requirements of law."

Of course, if the doctor is unable to reach any such conclusion or feels not qualified to do so he should say so. Some people feel that no physician should accept an appointment or employment as an examiner or witness in these cases unless he is prepared and willing, given sufficient information, to express conclusions in the language of the act, even though it may well be that moral and social judgments seem to be required. On the other hand, others, including the authors of this paper, feel that law has made it abundantly clear that the conclusions of experts on these matters are not medical judgments and not binding upon juries or courts. Therefore, the physician should not be asked to give these conclusions unless he is permitted to add that his opinion does not pretend to be an exclusively medical one and is based, in part at least, upon his own social and moral values.

It should also be emphasized again that medical labels or formal psychiatric diagnoses are not of too much importance. It is not particularly helpful and may even be misleading to say that the accused is "psychotic" or "psychopathic" or "schizophrenic," without careful elaboration. These words are meaningless to the average laymen and might be taken to connote "insanity" and, with it, irresponsibility when that may not be the case. Factual detail is important. So are conclusions directed to the legal tests of fitness to proceed or for execution or of responsibility at the time of the crime. It must ever be borne in mind that although medical facts and opinions are sought it will be for the jury or judge as trier of the facts to say whether the accused meets the tests laid down by law.

Finally, since it now appears that for the first time in Missouri the law is willing to receive evidence of partial incapacity, the physician should not neglect stating the degree of any mental abnormality as well as its chronicity and prognosis. If the accused is partially incapacitated he may not be held fully responsible. That, too, may mean the difference between the conviction of a capital offense, followed by the death penalty, and a finding of guilt of a lesser offense punishable by imprisonment.

THE FUTURE LAW

On review of Missouri's new mental responsibility law the real questions presented are not whether we have gone too far but whether we have gone far enough, not whether we have satisfactorily adjusted the law to current mores but whether we have frozen the law into a religio-punitive code which may foster rather than prevent crime, not whether we have avoided executing and incarcerating in prisons mentally ill persons who should not be punished but whether we have buried them alive and for life in maximum security mental hospitals whose bars are no less real, whose deprivations may be no less frustrating, and whose terrors may be no less embittering than those suffered in a place of penitence called a penitentiary.

It may be that the old law was so inadequate, incomplete and unjust that any escape from it was desirable. The need for relief, denied or ignored so long, became so desperate that any bargain or compromise seemed welcome. Had more been asked of the legislature nothing might have been granted. Furthermore, positive reform cannot advance too far ahead of prevailing moral, ethical and sociological concepts. Law at best can lead; it cannot force changes which must be preceded by enlightenment of the community. The problem for today and tomorrow in this area of law as well as in others is the education of the public to insufficiencies and inequities which have long existed and still remain. In that way when change comes, as it inevitably will, it will be an advance led by science and not a retreat demanded by ignorance and superstition.

Let us examine for a moment the few facts already established with sufficient reliability to indicate what the ultimate goal should be and the best means of attaining it:

1. The basic postulate of the criminal law, derived from concepts which emerged centuries ago first from superstition and then from religion, is the idea that every "normal" individual knows what he is doing and whether it is morally wrong, and has the ability to make and carry into execution a "free will" choice of whether to adhere to the right. It is then concluded that if the "normal" person commits a crime he has done so because he intended evil. In other words, the "cause" of his crime was a guilty mind. On the other hand, it is also assumed that a small child or a person suffering from a mental disease or defect (and, therefore, "child-like") may not know right from wrong, or, if he does, cannot conform to the right. From this it would follow that the "cause" of such an individual's crime is his undeveloped or diseased mind.

The fallacy of these notions has long been demonstrated by criminologists who no longer speak of "causes" of crime but look, rather, to the roots which nourish it from many sources both within and outside the individual. In recent years scientific support has been found for the proposition that "normal" individuals have some "freedom of will." However, even the "normal" person is not always able to exercise that freedom. Furthermore, individuals differ in their capacities to think, feel, choose and conform. They do not all have the same mental capacities and "free will," but, rather, shade from the complete imbecile to the best adjusted person in society.

2. The criminal law's second postulate or assumption is that the "normal" criminal should be punished for several reasons: first, because it seems "just" that he should "pay" for his crime by suffering (or death), second, because by making an example of him by imprisonment or death, he and others will be deterred from similar offenses. In recent years a third reason for punishment has been added: the criminal can be rehabilitated while confined in prison,

though this goal is lost, of course, if the prisoner is put to death.

A substantial number, if not the majority, of modern criminologists, penologists, psychiatrists and students of the social sciences feel that even though many of the older, more sordid prison practices have been eliminated, the entire system of prosecution, guilt-fastening and punishment fails as a deterrent of crime. It is particularly ineffective to prevent murder which, with some exceptions, is usually committed without regard to the consequences to the murderer. And the death penalty is the least effective method of deterrence of all, no matter what the crime may be. These observations are of the highest significance since "insanity" is pleaded as a defense more often in murder cases and other capital offenses than in those which do not carry the death penalty. So far as the individual prisoner is concerned, the death penalty is a completely effective deterrent. So is life imprisonment, except the hazard run by guards and fellow prisoners. But anything short of those penalties is more likely to embitter the individual and promote recidivism after his release than to deter him.

It is true, of course, that imprisonment offers an opportunity to rehabilitate a law-breaker, and there can be no quarrel with that as a legitimate goal of punishment both from the standpoint of the individual and society. How successful imprisonment is in this regard or whether the same end could be achieved by other means is something else again, but need not concern us here. As for the first reason for punishment—retribution—or, on a more sophisticated level, the reaffirmation of society's moral values and the integrity of its promises to punish if the law is broken, it is generally agreed, though not unanimously by any means, that retribution is, as Bertrand Russell said, only a euphemism for revenge and not a worthy goal in a civilized society that pretends to be humane. There is, indeed, good reason to believe that much of "the urge to punish" is an expression of the community's unconscious desire to shift the burden of its own guilt and to be punished therefor through a scapegoat. For this reason it may be that when the accused is "abnormal" or "insane," society does not identify with him and does not care to wreak retributive justice upon him.

3. A third postulate of criminal law is that "intent," "knowledge," "capacity to adhere to the right or conform to the law," "guilt" and such are truths which can be discovered through the adversary system in which the prosecution and defense strive with one another under rigid procedural rules with the judge as referee, the jury declaring the winner and a man's life or liberty as the stake in the contest. The result is then declared as "just."

Of course, it is well known that such a system is not capable of discovering the truth in a substantial number of cases and, for that matter, is no longer defended as being able to do so. Rather, it is customarily said that the chief justification of the system is its introduction of non-legal factors into the law, such as the community's sense of moral values and notions of justice for the particular case. This is rationalized on the basis that the object of the judicial process is popular justice and not the discovery of the truth of the matter.

Aside from the basic immorality and unhealthiness of any conduct which pretends to accomplish one thing while attempting to achieve another, there is grave doubt that the adversary process in criminal cases either finds truth or does justice in any sense, popular or otherwise. The adversaries are usually unequal, mostly because of the poverty of the accused but partly because even with funds he cannot obtain adequate pre-trial access to the facts to defend himself properly. In other words the rules of the "game" are slanted against him. Then there is such a wide variation in the abilities and proclivities of judges, attorneys and jurors that the ultimate result is determined by fortuitous circumstances and is almost impossible to predict. When "insanity" is in issue, the role played by experts becomes of enormous importance. If, as under the new Missouri law, an impartial court-appointed expert may be provided on motion of either the state or defense, either party may also employ experts of their own choosing. The bias and other problems thus introduced into the case have already been pointed out. The worst rule of law is that which permits experts to give their opinions on ultimate issues of responsibility which is a legal problem involving moral and social judgments on which experts have no more competence—and perhaps less—than the layman in the jury box. The contentions and disagreements of experts are repeated by similar conduct of the attorneys whose sworn duty it is to win by any legal or ethical means but without regard to whether the result is a true or just one.

4. Missouri's criminal law contains other elements which are contrary to modern criminology, penology, psychiatry and social sciences.

The retention of the death penalty lies in the background as an impediment to any attempt to reform mental responsibility law. The jury is permitted to fix the punishment of all persons except when the prosecution pleads prior offenses under the Habitual Criminal Act. The results are erratic and more likely to fit the crime than the criminal. But even when the judge fixes the punishment wide variations may be found with no explanation except the personal predilections and prejudices of various judges. Probation and parole constitute the most hopeful sign of modernization and individualized justice in the system. However, when the accused is acquitted because "insane" he is not qualified for probation and parole. His future care will be in the hands of state mental hospitals, and under the new law they and the courts will determine if and when he may be released. If there were adequate personnel and facilities to assist the court before and after trial, the accused under the new law will be well cared for and will be released when that should be done. If, however, there are not enough funds for such hospital treatment and supervision, the mental institution will be nothing more than a prison under a different name and one more likely to do harm than good.

From these facts and observations the following tentative suggestions are offered, though no one is original:

First, as many have long suggested, the concepts of "intent," "knowledge," "wrong" should be eliminated from the law. This would permit abandonment of "insanity" as a defense. All persons who committed unlawful acts would be socially accountable, whether sane or insane. That issue, social accountability, could be handled by the adversary process, improved so that the indigent and all others accused of crime could engage in the controversy unaffected by such irrelevancies as poverty and the unfair advantages of surprise.

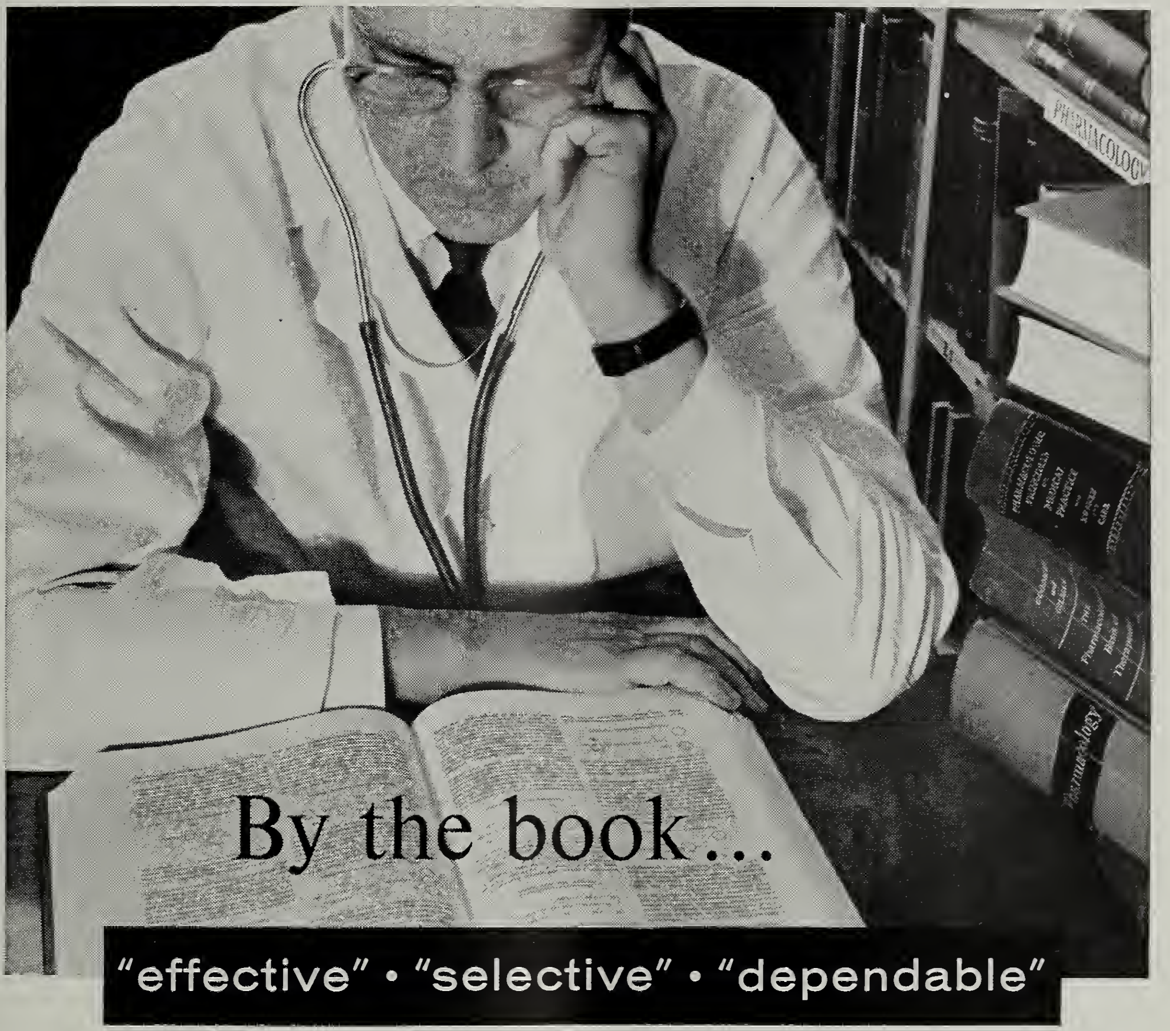
Second, preliminary to such an encounter the court should, preferably with aid of a clinic attached to or accessible to it, determine the mental fitness of the accused to be tried. Essentially the same procedures should be followed in this respect as under Missouri's new law.

Third, if the accused were found "guilty" of an unlawful act, the next problem would be what to do with him. This should be decided by a commission of persons capable of deciding it. "Insanity" at the time of the crime would be of no importance except in connection with determining the accused's present and future probable condition and conduct. The "sane" or "insane" could be treated alike, i.e., either institutionalized for care, rehabilitation or for safekeeping or conditionally or unconditionally released no matter what his crime or past record had been. A wide variety of institutions, penal and mental, would be available for segregation of various types of offenders. The death penalty would be abandoned.

Finally, society would devote more of its attention to the prevention of crime by measures to eliminate its manifold economic, social, genetic and other roots.

Conclusion

The millenium just envisioned may be years away, but continuing inroads upon ancient error will be made from time to time. Missouri's new mental responsibility law is a long overdue improvement in our system of criminal justice. The next advance might be made in two ways: first, by providing for the appointment of three impartial experts by the court instead of one, thus making their findings both more acceptable and, perhaps, reliable than those of one expert alone, and, second, by forbidding any such expert from delivering any opinion as to whether the accused met the legal test of "sanity," since that issue involves a moral and social rather than scientific judgment. Abolition of the death penalty would probably reduce the pleas of "insanity" to a minimum. So would an enlightened system of parole and probation, the imposition of an indeterminate sentence eliminating the jury as a vehicle for fixing punishment, and a pretrial screening of persons accused of crime who, if found then "insane," would probably be handled in such a way as would make an ultimate trial for the offense improbable. All of these things would meet the dual requirements of justice both to the individual and to society as a whole.



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SOLOMON GARB, M.D., *Columbia*

Thermonuclear Survival

Civil Defense in Industry

There has been a growing interest on the part of industry in civil defense. Indeed, this interest has been one of the bright spots in the civil defense picture. The complexity of civil defense problems as related to industry, however, has apparently hindered the transition from interest to definitive action. Accordingly, it may be helpful to analyze and dissect the facets of the civil defense problems of industry, indicating the areas in which positive action can be helpful. Obviously, because of the diversity of industrial plants and products, modifications will be needed for many companies.

Importance of Industrial Civil Defense

Industrial civil defense has several aspects of national importance. The simplest and most direct is the contribution to the saving of the lives of the workmen and, when possible, their families. In almost all cases, this is a vital and primary role. Even when public shelters are nearby, it can be anticipated that they will be overcrowded. Furthermore, if warning time is short, there may not be time for industrial workers to leave their jobs and get to a public shelter in time to escape fire and blast effects. There would probably be enough time to escape fallout radiation, however.

A second role is directly related to the first. It is the preservation of a functionable core of skilled personnel who can resume essential production at the earliest possible moment after an attack, so as to aid the national recovery. Obviously, the weight of this role depends on the industry involved. It would be of the greatest importance in some food-processing, ethical pharmaceutical, fuel manufacturing and processing and some chemical plants. It would be of considerable importance in steel, aluminum, rubber and other basic industries. It would have minimal importance in the luxury industries.

A third role is the preservation, in good condition, of the physical plant so that production can be resumed as soon after an attack as is consistent with the safety of the personnel.

A fourth role is the training and organization of cadres of personnel who can help official civil defense officers in any disaster, thermonuclear or non-military, to protect others in the community.

Why Should Industry Bother With Civil Defense?

Having considered the facets of industrial civil defense, it is now appropriate to discuss the reasons why industry should undertake the expense and effort of an effective civil defense program. The main reason, of course, is that industry is part of the United States, and owes a patriotic duty to the country to assist in its defense in every possible way. If individual Americans can be required to serve in the armed forces and, if necessary, sacrifice their lives, it is not unreasonable to ask that business firms be willing to make some sacrifices also in order to preserve the country.

There are other reasons for industrial participation in the national civil defense effort which supplement and reinforce the main one, so that management and stockholders should be willing to make the extra effort to set up an effective civil defense program. The positive effect of a coordinated, effective civil defense program on employee morale and goodwill would be substantial.

This continues a series of articles on thermonuclear survival. These include material previously published in the *New York State Journal of Medicine*, and are published with permission of that journal.

Dr. Garb is secretary of Medical Education for National Defense at the University of Missouri. He is Associate Professor of Pharmacology, Department of Physiology and Pharmacology, at the University of Missouri School of Medicine.

Reprints of individual articles will not be available but reprints of the entire series will be made available if there is sufficient demand.

Many large firms have extensive employee recreation programs, designed to improve employee relations. These include bowling leagues, basketball teams and such. Apparently, the additional expense of such programs is justified by the resulting improvement in employee efficiency, morale and loyalty. Yet only a minority of employees actually participate in such activities. By contrast, an effective civil defense program would benefit all employees. Those firms which have already instituted civil defense programs have noted gratifying expressions of employee appreciation.

Another reason for industrial participation in civil defense is the image of a company and industry as seen by the general public. A firm which sets up an effective civil defense program for its employees demonstrates a feeling of responsibility for them and for the nation. It shows that it is willing not only to reap the profits of a free enterprise economy but to do its share to preserve freedom for all. The importance of a good public image, based on solid performance rather than press agentry, should not be minimized.

Planning Industrial Civil Defense

The value of dispersion of plants in order to avoid presenting a concentrated target to enemy missiles has been recognized for a long time. There is little that can be added here to the recommendations which have already been made by others. However, one point should be kept clearly in mind. Dispersion is not in itself an adequate civil defense program. Locating a plant in a small town away from target areas will simplify other civil defense measures. Protection may not be needed against blast and fire. However, fallout protection will be necessary no matter where the plant is located.

Since the major danger in a thermonuclear war will come from fallout, protection against fallout radiation is the most important single civil defense measure for industry—or any other sector of the nation. If fallout protection can be designed into a factory basement before it is built, it might be possible to obtain it at a relatively low cost. In existing plants, the cost of alterations might be much higher. There are two basic approaches to building fallout protection. One consists of adding thick concrete masses to areas of a building to provide shielding. Another consists of installing a series of corrugated steel culverts underground, in the adjacent yard, when available. This latter method can provide not only fallout, but also blast and fire, protection. In general, any plant within 15 miles of a probable enemy target should make every effort to provide blast and fire protection also.

In planning shelter space, it is advisable to consider provisions for the families of the workmen. In some corporations this will obviously be impossible because of the volume of space needed. However, in other corporations, the ratio of overall space to personnel may be high so that modifications of a basement area could provide enough shelter area for families of the workmen.

In planning an industrial shelter, it is advisable to seek protection factors higher than the government minimums. If possible, the fallout protection factor should be 1,000, although in geographically isolated areas, 400 would probably be quite enough, and even the present government minimum of 100 would save many lives. In seeking blast protection, it is advisable to design a structure which will resist 35 pounds per square inch blast overpressure. Fire protection is also of great importance but, in most cases, depends more on the location of inflammable materials than than on the shelter itself. In situations in which a large amount of inflammable material is kept in or near the plant, fire protection can be provided according to the principles discussed in the article on fire storm. In the long run, it is more economical to provide a high degree of protection than to meet minimal standards only. It may be anticipated that the potential weight of an enemy attack upon the United States will increase as the years go by. A shelter which is barely adequate in 1964 may be inadequate by 1970, and the expenses of subsequent modifications are likely to be greater than the initial expense of a high quality shelter.

Cost of Industrial Civil Defense

In assessing the cost of civil defense, it is important to consider the useful life of the shelters provided. The actual cost can then be considered a capital item, to be allocated over the years. For example, if a steel culvert type shelter is installed at a total cost of $130 per life, it can be expected to last 20 to 50 years and its yearly cost would range from $130/20 years or $6.50 per year per life, to $130/50 years, or $2.60 per year per life. The added costs of stored rations and supplies must also be considered, of course, and the costs of reinforced concrete shelters will vary considerably, and should be compared to these baselines.

CIVIL DEFENSE RESCUE TEAMS

Another important contribution would be the organization, training and equipping of various types of civil defense rescue teams. These groups, made up of volunteers from the plant's personnel, would be prepared to help other areas of the community in the event of any sort of disaster. The team would depend on the type of industry. For example, a heavy rescue team, equipped with bulldozers and cranes to rescue victims trapped in heavy debris after a tornado would be appropriate to a construction firm, but not to a light manufacturing plant. The question may be raised—why should a particular company bother with this? Why not just encourage individual workers to join civil defense teams in the community? There are several reasons. First, the efficiency of a plant-derived team is likely to be much higher in a disaster than the efficiency of a neighborhood or community organized team. A plant-organized team would consist of members who already know how to work together. Their rescue functions can be closely related to their everyday work skills. In many cases, they could have permission to use company equipment in an emergency. From the standpoint of the company, the organization of such teams can be most beneficial in terms of employee morale and community attitudes. There are many employees whose jobs are routine and uninteresting. Often, the individual worker cannot readily identify his contribution to the national welfare. The opportunity to serve his fellows and community in a heroic capacity is likely to be quite welcome. Often these people cannot find appropriate niches in civil defense teams organized on a community-wide basis. All too often, there are no such organizations for him to join.

Careful thought should go into the planning of civil defense teams. First, it should be recognized that they are most likely to be called upon in nonmilitary disasters, such as tornadoes and fires. Secondly, the needs and existing personnel of the local area should be considered. The type of plant, and the equipment used are of great importance. It is usually advisable to consult the local civil defense director early in the planning phase, and to keep him informed of the status of such teams at all times. In the event of an emergency, he would have to know how to use their assistance to best advantage.

If the plant has an industrial nurse, she can be asked to take a major role in organizing, training and leading the teams. In general, the nursing profession is quite aware of the need for trained help in emergencies. Nursing literature helps keep nurses up-to-date in planning for disasters. Thus, the industrial nurse is likely to be one of the most capable leaders of a rescue team or group of rescue teams.

Important advice and help can also be obtained from the medical profession. If a plant has its own physician, he can not only advise on the basis of his own experience, but can also make available the entire accumulated knowledge of the medical profession on disaster management. The AMA has a special disaster committee which, among other things, collects, organizes and distributes information on disaster management to physicians. Many state and some county medical societies have similar committees. A plant which does not have its own physician can obtain the help of the medical profession by calling the local county medical society.

It may be helpful to consider the types of civil defense teams which could be organized and used to help in a disaster. Some examples are listed below:

Heavy Rescue Team.—Mission: to rescue people trapped under heavy debris. Apparatus required: bulldozers, cranes, jacks, metal-cutting torches.

Medium Rescue Team.—Missions: to rescue people trapped under medium debris. Apparatus required: truck-mounted winches, jacks, block and tackle, crow-bars.

Light Rescue Team.—Mission: to rescue people trapped under light debris. Apparatus required: ropes, crow-bars, hand tools.

Ambulance Teams.—Mission: to transport the injured to hospitals. Apparatus required: trucks (preferably closed) and busses.

Litter-bearer Teams.—Mission: to transport the injured through debris to pick-up points which ambulance teams can reach. Apparatus required: hand tools to construct litters, or surplus litters.

First-aid Teams.—Missions: to provide lifesaving first aid to the injured before they are transported on litters. Apparatus required: splints and bandages, which can be homemade.

Communication Teams.—Mission: to provide communication between the various groups and echelons helping the disaster victims. Apparatus needed: portable short-wave radios.

Fire-fighting Teams.—Mission: to assist the local firemen. Apparatus required: variable.

Auxiliary Police Teams.—Mission: to assist local police in traffic control (a vital role) to keep the roads clear for vital emergency vehicles.

(Continued on page 388)

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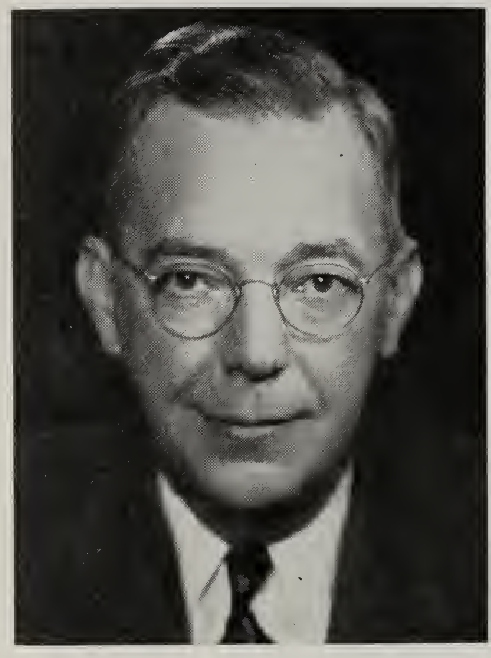

Leonard T. Furlow, M.D.

President's Message

Each member who attended the Annual Session had it impressed upon him several times that this is a crucial year in politics. Congressman Hall and AMA President-Elect Welch both emphasized this. In the House of Delegates, Dr. Ralph Perry, Chairman of Missouri Medical Political Action Committee, stressed the importance of MMPAC, as did a resolution adopted by the House.

Since the Annual Session members have been contacted by direct mail. In all cases, it has been pointed out that it is not only the practice of medicine and the health of the public that may be adversely affected, but free enterprise in many other fields is being threatened.

We must carry through in a positive way by contacting our congressmen and by liberally supporting MMPAC.

Leonard T. Furlow

EDITORIAL

PAUL R. WHITENER, M.D., NAMED PRESIDENT-ELECT

Paul R. Whitener, M.D., St. Ann, was named President-Elect of the Missouri State Medical Association at the 106th Annual Session held March 8 to 11 at Hotel Chase, St. Louis. Dr. Whitener, a general practitioner, will take office as President next year.

Leonard T. Furlow, M.D., St. Louis, was installed as President at the session.

Paul R. Whitener, M.D.

Dr. Whitener, who was born in Fredericktown, graduated from Washington University School of Medicine in 1924. He served his internship and residency at the Methodist Hospital in Indianapolis, Ind.

A past president of the St. Louis County Medical Society, Dr. Whitener has been a member of the Council of MSMA since 1959. During the Annual Session, just concluded, he was also elected to the board of trustees of the Missouri State Medical Foundation.

In 1958, Dr. Whitener was named the Outstanding Alumnus of Central College, Fayette, Mo. He has received a citation from the St. Louis Methodist Church Conference for his work in establishing the Blue Mountain Camp in Arcadia.

He is 63 years old and resides with his wife, the former Annah Elizabeth Clark, in St. Ann. They have two children, Carolyn Ann and Miles C., also a physician.

Other officers elected at the 106th Annual Session include Ben M. Bull, M.D., Ironton; Ralph E. Duncan, M.D., Kansas City, and Edgar W. Davis, M.D., St. Louis County, Vice Presidents.

Chosen for two year terms as Missouri delegates to the American Medical Association were U. S. Representative Durward G. Hall, M.D., Springfield, and J. Loren Washburn, M.D., Versailles. J. H. Summers, M.D., Lebanon, and Thompson E. Potter, M.D., St. Joseph, were elected alternate delegates. Hugh E. Stephenson, M.D., Columbia, was elected to fill an unexpired term as an AMA alternate delegate.

Stanley S. Peterson, M.D., Springfield, was elected Speaker of the House of Delegates and Paul Max, M.D., St. Louis, was named Vice Speaker.

Councilors elected or reelected at the Session are Joseph L. Fisher, M.D., St. Joseph, 1st District; David N. Kerr, M.D., St. Louis, 3rd District; Byron M. Stuart, M.D., Boonville, 5th District; Hector W. Benoit Jr., M.D., Kansas City, 7th District; E. A. Stricker, M.D., St. James, 9th District, and to serve unexpired terms on the Council, Paul H. Rother, M.D., St. Charles, 4th District, and Rolla B. Wray, M.D., Rolla, 6th District. Dr. Stuart was reelected Chairman of the Council and Dr. Benoit was elected Vice Chairman.

John I. Matthews, M.D., Jefferson City, was reelected Secretary, and Charles R. Doyle, M.D., St. Louis, was reelected Treasurer.

Ramblings of the Field Secretary

One hundred eighty-eight members, guests and wives attended the Annual Installation of Officers Dinner-Dance of the Greene County Medical Society on Saturday evening, February 15, 1964, at the Holiday Inn, Springfield. The evening festivities began with a social hour at 6:30 p.m. sponsored jointly by Misemer Pharmaceutical and the Crank Drug Company. Dr. F. T. H'Doubler Jr., presided as master of ceremonies and following dinner introduced the special guests for the evening. He also announced that Dr. Kenneth C. Hollweg, Kansas City, President of the MSMA, and Mrs. Hollweg and Mr. and Mrs. Ray McIntyre of the state office, had expressed their regrets at being unable to attend because of adverse weather conditions.

Dr. Silsby (left) receives appreciation plaque from incoming president Dr. Knabb.

Dancing followed the formal program.

Dr. Harry D. Silsby, retiring president, officially installed Dr. Kenneth E. Knabb as the new president of the Greene County Medical Society for 1964. Other officers installed were Drs. William H. Snead, president-elect; Guy D. Callaway Jr., secretary; Edwin M. Powell, treasurer and six members of the executive council, M. D. Bonebrake, Howard J. McAlhany, H. B. Ivy, James T. Brown, F. T. H'Doubler Jr. and J. Westerfield Williams.

At the conclusion of the formal program Dr. Knabb presented Dr. Silsby an appreciation plaque as the outgoing president of the society.

The lighter part of the program then began with the introductions by Dr. H'Doubler of the "Pitchikers," international championship barbershop quartet who presented a most enjoyable program. The evening festivities were concluded with a period of dancing to the music of Dick Neumann's band.

Reports all indicate that this was a full evening of pleasurable entertainment, visiting and official society activity.

Another "Sports Injury Conference" was held on Saturday, April 4 in Kansas City, at Pierson Hall, University of Missouri at Kansas City. This one day conference began at 9:00 a.m. and terminated at 3:30 p.m. The program covered the following subjects, "Some Medical Problems in High School Athletics," "Orthopedic Aspects of Athletic Injuries," "Neurological Aspects of Athletic Injuries," "Some Factors Which Determine the Capacity of Neuromuscular Performance." These sessions were interspersed with question and answer periods.

The conference was sponsored by the Jackson County Medical Society in cooperation with the Kansas City Missouri School District. This is the first session of this type sponsored by the Jackson County Medical Seciety, but it is hoped this will become an annual event.

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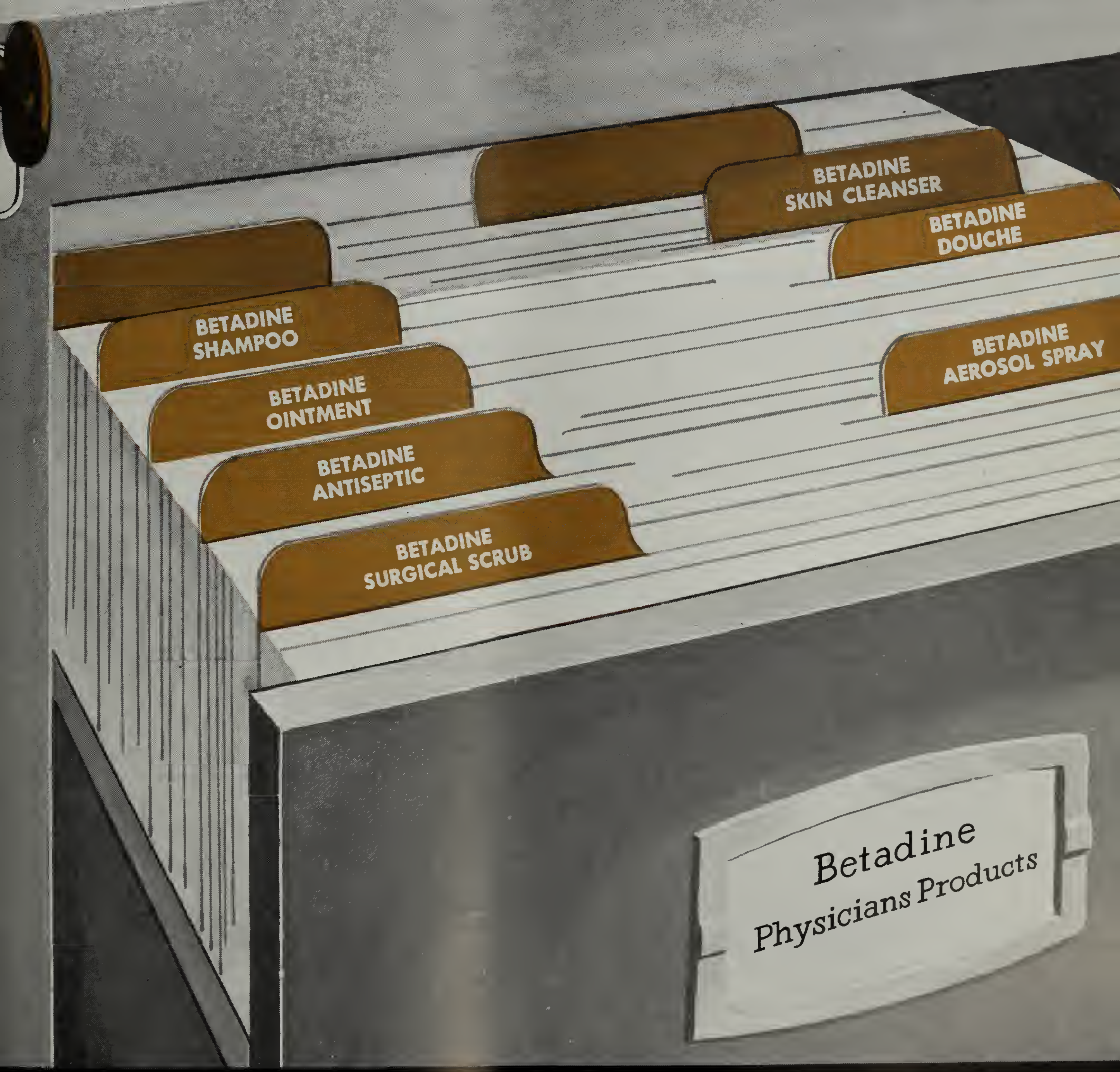
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News—Personal and Professional

The Jasper County Medical Secretaries and Assistants Society had as speaker at a March meeting **Winfred L. Post**, M.D., Joplin.

"Corneal Transplantation and Eye Banks" was discussed by **Lawrence L. Hyde**, M.D., Kansas City, at an Overland Park Lions Club meeting in February.

The Weeden A. Petree Jr. Post of the American Legion, St. Joseph, heard **G. T. Carpenter**, M.D., St. Joseph, talk on "You and Your Heart" at a recent meeting.

Officers recently elected by the Greater St. Louis Society of Radiologists are **Harry I. Berland**, M.D., president; **Clyde M. Witt**, M.D., vice president, and **Arthur A. Porporis**, M.D., secretary-treasurer.

The Warrensburg Lions Club had **Louis Belinson**, M.D., Jefferson City, as speaker at a February meeting. He discussed "Retardation."

A dinner at the Covenant Presbyterian Church, St. Louis, honored **Martin E. Sheets**, M.D., Chesterfield, on his 88th birthday. Dr. Sheets directed the St. Louis World Fair's hospital in 1904.

The Carrollton Child Study Club had as speaker for a February meeting **Eugene L. Bales**, M.D., Carrollton.

The King-Anderson bill was discussed by **Roland T. Smith**, M.D., Joplin, at a Kiwanis Club meeting in Joplin in early March.

In February **George J. Lytton**, M.D., Kansas City, was speaker at a meeting of the Parent Teachers Association of Central High School, St. Joseph.

A symposium on "Adolescent Medicine" presented at Columbia in April by the American Academy of Pediatrics, Missouri Chapter, was moderated by **Jerome T. Y. Shen**, M.D., St. Louis.

Appearing on the program of the Southwestern Surgical Congress as guest speakers late in April were **J. Eugene Lewis Jr.**, M.D., and **Oscar P. Hampton Jr.**, M.D., St. Louis.

Speaking before the adult class of the Community Christian Church, Kansas City, in March **James E. Young**, M.D., Kansas City, discussed "The Relationship Between Mental Health, Psychiatry and Religion."

Two papers were presented by **Stanley L. Goldman**, M.D., Kansas City, at a recent meeting of the American College of Allergists. He spoke on "Simple Office Methods in Pulmonary Function Testing" and "Asthmatic Rehabilitation Technique."

The Missouri Radiological Society at a meeting in March elected **Marvin L. Napper**, M.D., Springfield, as president.

The Social Health Association of Greater St. Louis elected **M. Norman Orgel**, M.D., St. Louis, as president. Among vice presidents elected were Drs. **B. Y. Glassberg**, **Jules H. Kopp**, **Ellen Loeffel** and **Melvin M. Schwartz.** Dr. **Marvin Rennard** was elected secretary-treasurer.

The Poplar Bluff Rotary Club recently elected **Cyril A. Post**, M.D., Poplar Bluff, as president.

The *Lebanon Record* on March 25 carried a four column article with pictures of early physicians in the area. The leading picture is of **Shederic A. Casey**, M.D., Lebanon.

Speaking at the South Side Rotary Club, St. Joseph, in February **L. W. Ide**, M.D., discussed the heart fund.

The Benton School P.T.A., Neosho, heard **Paul L. Barone**, M.D., Nevada, discuss mental health problems at a March meeting.

The Central Missouri Medical Assistant's Society had as guest speaker at their March meeting **C. C. Cohrs**, M.D., Moberly.

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Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

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In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, distilled water, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax and 0.25% methylparaben as preservative.

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New Members

Edward T. Barker, M.D., 931 S. Gore St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Barker is a native of St. Louis, received his preliminary education at Princeton University, and his M.D. degree at Washington University in 1957. He specializes in pediatrics.

George W. Bugg, M.D., 2601 N. Whittier St., St. Louis, has become a member of St. Louis Medical Society. Dr. Bugg is a native of Nashville, Tenn., received his preliminary education at Tennessee State University, and his M.D. degree at Meharry Medical College in 1962. He specializes in thoracic surgery.

James O. Elam, M.D., 24th & Cherry Sts., Kansas City, has become a member of Jackson County Medical Society. Dr. Elam is a native of Austin, Tex., received his preliminary education at the University of Texas, and his M.D. degree at Johns Hopkins University in 1945. He specializes in anesthesiology.

Albert J. Grant, M.D., 115 N. 5th St., Hannibal, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Grant is a native of Eddystone, Pa., received his preliminary education at Ursinus College, and his M.D. degree at Jefferson Medical College in 1950. He specializes in general surgery.

Edward E. Haith, M.D., 7633 Baltimore Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Haith is a native of Kansas City, received his preliminary education at Washington University, and his M.D. degree at the University of Kansas in 1959. He specializes in surgery.

Henry M. Hardy, M.D., 4620 Nichols Parkway, Kansas City, has become a member of Jackson County Medical Society. Dr. Hardy is a native of England, received his preliminary education at Yorkshire, England, and his M.D. degree at the University of Leeds in 1949. He specializes in anesthesiology.

Richard W. Hudgens, M.D., 708 Radcliffe St., St. Louis, has become a member of St. Louis County Medical Society. Dr. Hudgens is a native of Greenville, S. C., received his preliminary education at Princeton University, and his M.D. degree at Washington University in 1956. He specializes in psychiatry.

Theodore L. McNutt, M.D., 5801 E. 113th St., Kansas City, has become a member of Jackson County Medical Society. Dr. McNutt is a native of Hays, Kans., received his preliminary education at Fort Hays State College, and his M.D. degree at the University of Kansas in 1955. He specializes in general practice.

William W. Moe, M.D., 2625 W. Paseo, Kansas City, has become a member of Jackson County Medical Society. Dr. Moe is a native of Kansas City, received his preliminary education at Sophia University, and his M.D. degree at the University of Kansas in 1960. He specializes in psychiatry.

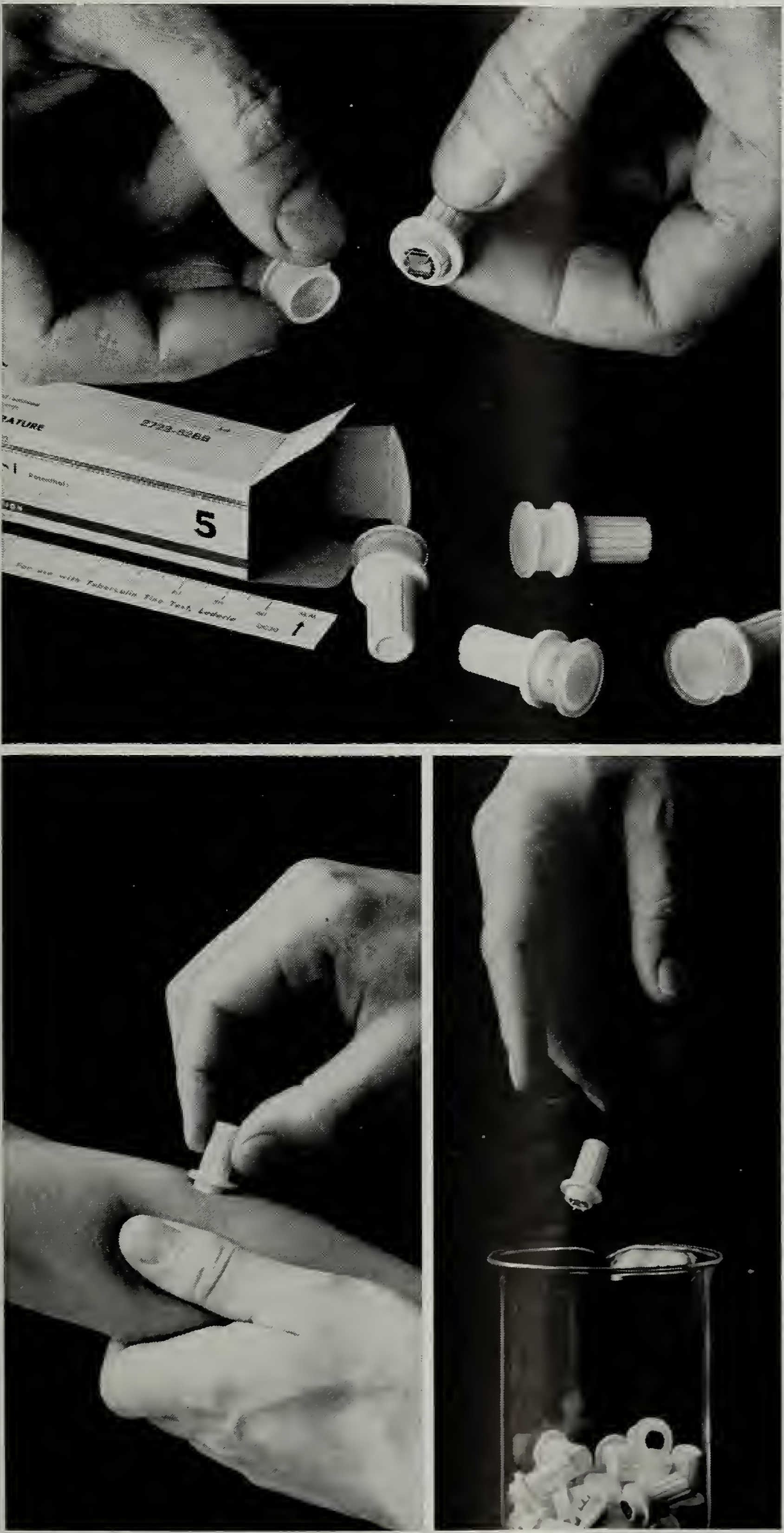
Martin F. Ostotaza, M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Ostotaza is a native of St. Louis, received his preliminary education at Seattle University, and his M.D. degree at St. Louis University in 1956. He specializes in obstetrics and gynecology.

Joseph R. Sasano Jr., M.D., 1710 Independence Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Sasano is a native of New York, received his preliminary education at Manhattan College, and his M.D. degree at Georgetown University in 1954. He specializes in pediatrics.

Alfred Schuetz, M.D., State Hospital, Fulton, has become a member of Callaway County Medical Society. Dr. Schuetz is a native of Tuermitf, Czechoslovakia, received his preliminary education at Oberscyule, Diukelsbueyl, Germany, and his M.D. degree at Medical Faculty University of Wuersburg, Germany, in 1954. He specializes in internal medicine.

Albert W. Shiflet, M.D., Wheeling, has become a member of Grand River County Medical Society. Dr. Shiflet is a native of Lebanon, Mo., received his preliminary education at Oklahoma University, and his M.D. degree as the University of Oklahoma in 1933. He specializes in orthopedics.

Peter J. Soto Jr., M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis



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Medical Society. Dr. Soto is a native of Mobile, Ala., received his preliminary education at Spring Hill College, and his M.D. degree at St. Louis University in 1956. He specializes in pathology.

Ernest Velasco, M.D., 2330 S. 9th St., St. Louis, has became a member of St. Louis Medical Society. Dr. Velasco is a native of Cavite City, Philippine Islands, received his preliminary education at St. Thomas University, and his M.D. degree at St. Thomas University in 1952. He specializes in internal medicine and surgery.

Jerome Williams, M.D., 4703 St. Louis Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Williams is a native of St. Louis, received his preliminary education at Morehouse College, and his M.D. degree at Meharry Medical College in 1947. He specializes in internal medicine.

DEATHS

Kelley, Isaac Dee, M.D., St. Louis, a graduate of St. Louis University, 1912; member of St. Louis Medical Society; aged 78; died February 28, 1964.

Bailey, Fred W., M.D., St. Petersburg, Fla., a graduate of Marion Sims Beaumont College, 1903; member of St. Louis Medical Society; aged 88; died March 5, 1964.

Beckman, William, M.D., Strasburg, a graduate of University Medical College, 1904; member of West Central Missouri Medical Society; aged 87; died March 14, 1964.

Gansloser, M. W., M.D., St. Louis, a graduate of St. Louis University; member of St. Louis Medical Society; aged 80; died March 14, 1964.

Swekosky, Frank J., M.D., St. Louis, a graduate of St. Louis University, 1937; member of St. Louis Medical Society; aged 52; died March 22, 1964.

Lerner, Abe F., M.D., University City, a graduate of St. Louis University, 1923; member of St. Louis County Medical Society; aged 67; died March 24, 1964.

Weiss, Richard S., M.D., Clayton, a graduate of Washington University, 1909; member of St. Louis Medical Society; aged 79; died March 27, 1964.

THERMONUCLEAR SURVIVAL

(Continued from page 376)

In special situations, other types of teams may be organized and used. Once organized, these teams would have to be thoroughly trained in their roles in order to be a real help. In some cases, personnel with appropriate military experience can be of great help in such groups.

A small firm might be able to handle only one team: a large firm might be able to manage a complete set of teams.

Minor disasters strike some part of the United States almost every week. Most of the initial rescue work is done by volunteers. Studies of past disasters in the United States have shown that many serious errors in handling the situation were due to absent or inadequate training, inadequate teamwork and inadequate leadership. The organization by industry of civil defense rescue teams to work directly under the appropriate civil defense director would be a major contribution to the nation's welfare.

Industrial civil defense, in its various aspects, can be a crucial factor in the nation's survival potential. It represents a challenge to industrial leaders, and it is hoped that they will meet it appropriately.

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For complete prescribing information, please see *PDR* or available literature.

Supplied: Bottles of 50 capsules.

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County Society News

FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

Buchanan County Medical Society

Forty physicians and attorneys attended the March 4 meeting of the Buchanan County Medical Society following a dinner at Hotel Robidoux. Members of the legal profession were invited to the meeting because of their interest in the program.

The speaker was Earl L. Loyd, M.D., Medical Consultant for the State Division of Vocational Rehabilitation in Jefferson City. Dr. Loyd was accompanied to St. Joseph by Messrs. Joy Talley and Don Cox, director and assistant director of the State Division of Vocational Rehabilitation. Both men, along with the speaker, answered questions in a question and answer period following Dr. Loyd's talk on "Medical Aspects of the Vocational Rehabilitation Program."

Dr. Loyd described the two-fold purpose of Missouri's rehabilitation program; restoration of disabled persons to the fullest physical, mental, vocational and economic usefullness; and the determination of disability for the bureau of old age and survivors insurance of the Social Security Administration. Rehabilitation is accomplished through physical and mental restoration services, counseling, vocational training and job-placement services. In discussing eligibility requirements for those receiving vocational eligibility requirements, Dr. Loyd outlined the role of the private physician in providing such services and the reason for consultative examinations and the need for additional medical information in making sound disability determination.

Dr. William Redmond, vice president, presided at the meeting. The program was introduced by Dr. Edmund W. Kline, program chairman.

Irvin Rosenthal, M.D., *Secretary*

Grand River Medical Society

On March 12, the regular monthly meeting of the Grand River Medical Society was held at the Strand Hotel in Chillicothe.

Following dinner the group was pleasantly entertained by a talented group of young ladies known as the "Doctors' Daughters." A top rate variety program was presented in honor of Doctor's Day by this group who shared at least one thing in common—they each had a proud father in the audience.

The speaker, Dr. Ulett, from the Department of Mental Diseases of the State of Missouri, presented an excellent movie and discussion on the care of retarded children in Missouri.

During a short business meeting a discussion of the new Vendor Drug program for welfare patients revealed the need for much more clarification and understanding of its goals and operation. It was moved that the Secretary contact the State Welfare Office for information in time for the April meeting.

Jack L. Vinyard, M.D., *Secretary*

SECOND DISTRICT

HARRY L. GREENE, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

The Chariton-Macon-Monroe-Randolph County Medical Society held its regular monthly dinner meeting on Thursday evening, March 12, at the Woodland Hospital in Moberly.

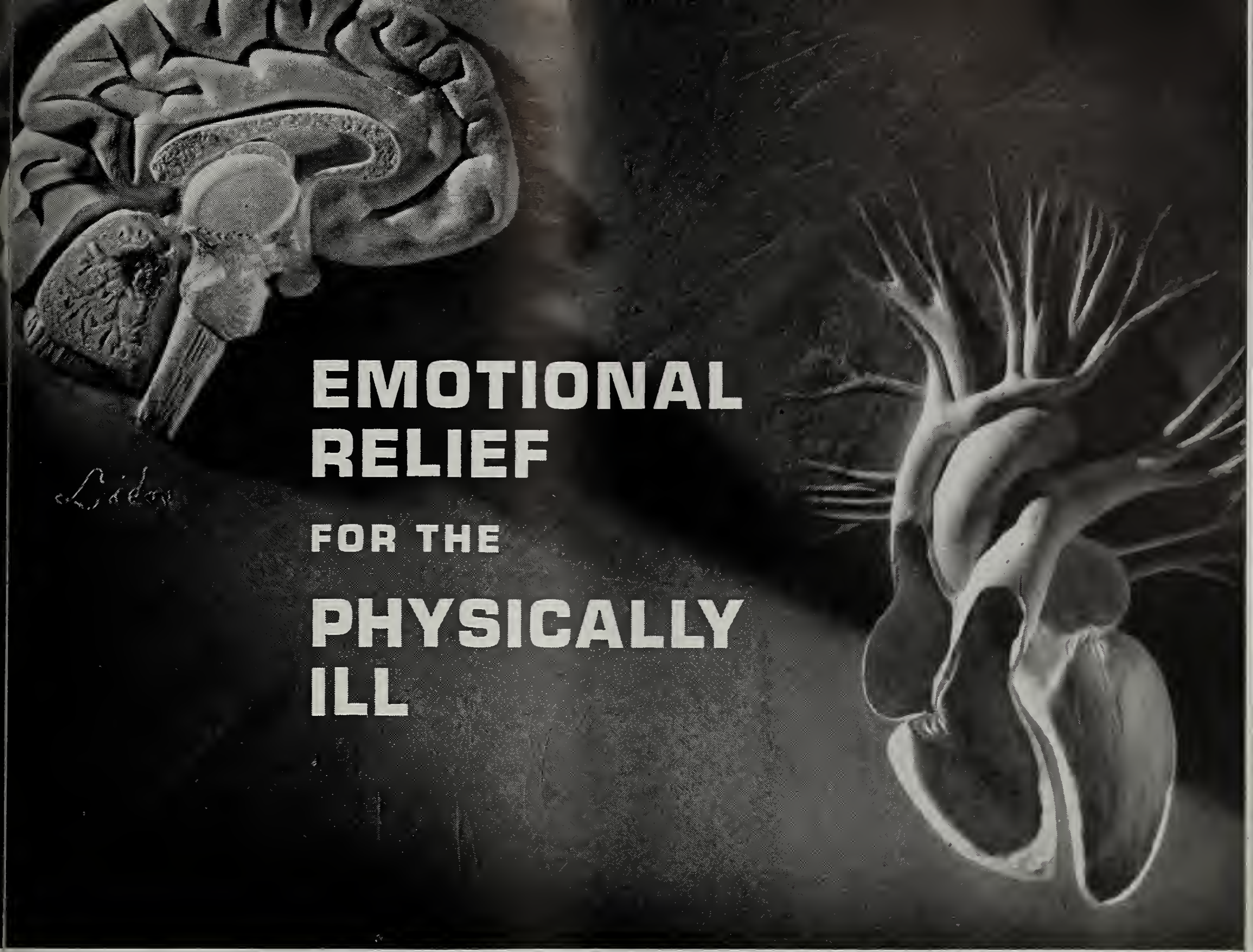
The scientific program was given by members of the Society who presented and discussed interesting and unusual cases.

A program of this nature is presented each year by members of the Society at one of the regular monthly meetings and always is unusually well received by the membership.

During the business part of the program the chairman of the oral polio program in each of the counties making up the Society reported on the polio program to date and indicated that another good turnout for the next feeding was indicated.

Member present were: Dr. J. E. Campbell, Macon County; Drs. F. L. Harms and D. D. Stuart, Chariton County; Dr. F. A. Barnett, Monroe County; and Drs. Josephine Baker, Avery P. Rowlette, Thomas S. Fleming, J. Will Fleming Jr., Robert H. Young, W. Deward Chute, Clarence C. Cohrs, L. E. Huber, P. V. Dreyer and C. C. Smith, Randolph County. Dr. Leopold Lachance of Centralia was a guest.

J. Will Fleming, M.D., *Secretary*



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Contraindications: Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage.

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SIXTH DISTRICT

ROLLA B. WRAY, NEVADA, COUNCILOR

Lafayette-Ray County Medical Society

The monthly meeting of the Lafayette-Ray County Medical Society was held at Maib's Cafe in Lexington on February 11. A total of 18 persons, including three guests were present.

The social hour was followed by dinner then the program was turned over to Dr. Dowell from Chillicothe, who is a Past-President of the MSMA. He presented some facts about state medicine, and these were later supplemented by remarks from Dr. Gentry, who is District No. 1 Health Officer. A short discussion period followed.

No further business was presented and the meeting adjourned.

W. C. LaHue, M.D., *Secretary*

Lafayette-Ray County Medical Society

The monthly meeting of the Lafayette-Ray County Medical Society was held at Maib's Cafe in Lexington on March 10. A total of nine members and wives were present. Attendance was somewhat hampered by the absence of Delegates who were at the state meeting.

Following the dinner, a short business meeting was called by president, Wilbur Fulkerson, M.D. A letter from the Ophthalmology Department of the University of Missouri was presented, discussing the setting up of a substation for eye collection, for the Lion's Eye Tissue Bank. This was approved for establishment in the local hospitals.

Further business included referral of applications for membership by Billy G. Crayton, M.D., and Donald Baker, M.D., to the credentials committee.

No further business was presented and the meeting was adjourned.

W. C. LaHue, M.D., *Secretary*

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TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

Mineral Area Medical Society

The February 27 meeting opened with a discussion by John McCarthy, M.D., of the Department of Medicine of St. Louis University Medical School on the "Iron Deficiency State." Following his lecture and his question and answer period, the business meeting opened with review of the minutes. Correction on the minutes concerning the names of delegates and alternates to the State Convention were made and approved.

The motion was made by Dr. Carleton and seconded by Dr. Grossman that Dr. Crouch, the chairman of Operation Hometown, and the president and secretary of the Society be authorized to arrange publication of advertisement on the King-Anderson Bill in local newspapers, as they felt advisable during the next month. The motion was carried unanimously.

Final plans for the first Oral Polio Immunization Sunday were reviewed. It was stated that a total of 40,000 doses of vaccine had been ordered for use in St. Francois and Iron counties. Various correspondence was reviewed, and no further action was felt indicated on it.

The meeting was adjourned at 9:50 p.m. following which the members of the Society met with the Auxiliary for dessert and coffee.

Attending were Drs. C. E. Michaelis, A. G. Karraker, Paul Dennis, Jack Hunt, W. A. Brennan, Ben Bull, Emmett Hoctor, William Patton, Marvin Grossman, F. R. Crouch, C. E. Carleton, Van Taylor, Jack Mullen and C. W. Chastain. Guests were Dr. Jonas Tejero and Dr. Querico Doronila from the State Hospital.

C. W. Chastain, M.D., *Secretary*

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Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

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Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

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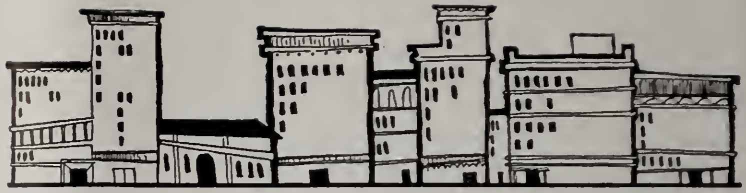
From the Medical Schools



SAINT LOUIS UNIVERSITY

Alumni Honored

The St. Louis University Medical Alumni Association honored sixteen past presidents of the Medical Alumni Association at a reception held in the Stockholm Room of the Chase-Park Plaza Hotel on March 10. Medical alumni, faculty and wives attended the affair.

Certificates of appreciation, designating quality of leadership, generous contribution of time and talent, were presented to ten past presidents by Dr. R. Emmet Kelly, president of the University's Medical Alumni Association. Six other physicians, unable to attend the affair, received the certificates by mail.

Past presidents in attendance for the honor ceremony were: Dr. Roy V. Boedeker, Dr. James P. Murphy, Dr. Matthew W. Weis, Dr. Jerome I. Simon, Dr. Alphonse M. McMahon, Dr. Daniel L. Sexton, Dr. Cyrus E. Burford, Dr. Lawrence M. Riordan, Dr. Helmuth H. Kramolowsky and Dr. Ralph A. Kinsella Sr., all of St. Louis.

The St. Louis University Medical Alumni Association presented past presidents of the Medical Alumni Association with certificates of appreciation at a reception in March. Recipients (l. to r.) Dr. James P. Murphy, Dr. Jerome I. Simon, Dean G. O. Broun Sr., who assisted at ceremony; Dr. Lawrence M. Riordan, Dr. R. Emmet Kelly, president, Medical Alumni Association; Dr. Matthew W. Weis, and Dr. Ralph A. Kinsella Sr.

Former past presidents of the medical alumni association unable to attend were: Dr. Garold V. Stryker, Venice, Fla.; Dr. Thomas J. Coogan, Chicago, Ill.; Dr. Thomas F. Reilly, Springfield, Mass.; Dr. Lowell S. Goin, Los Angeles; Dr. Edward H. McCormick, Toledo, Ohio. Dr. Fred W. Bailey received the award posthumously.

Symposium

The second annual Symposium on Research in Neurology and Psychiatry, featuring six guest lecturers, was presented by St. Louis University's Department of Neurology and Psychiatry on March 18. Dr. Louis L. Tureen, chairman, Section of Neurology, presided at the morning session. Dr. Edward T. Auer, director of the Department of Neurology and Psychiatry at St. Louis University and director, David P. Wohl Memorial Mental Health Institute, was chairman of the afternoon session.

The symposium opened with invocation by The Very Rev. Edward J. Drummond, S.J., Vice President for the Medical Center. An address of welcome by Dr. G. O. Broun Sr., dean, St. Louis University School of Medicine, followed.

Guest speakers and their topics were: Dr. Raymond B. Bauer, assistant professor of neurology, Wayne State University, "Controlled Study of Surgical and Medical Treatment of Extracranial Cerebrovascular Disease"; Dr. W. King Engel, chief of the Medical Neurology Branch, National Institute of Neurological Diseases and Blindness, "Neuromuscular Disease—Newer Methods of Clinical Investigations"; Dr. Maynard M. Cohen, "Carbohydrate and Amino Acid Interrelationships in Brain," Chairman, Department of Neurology, University of Illinois; Dr. James H. Ewing, associate professor of psychiatry, University of Pennsylvania, "The Creative Process and Psychopathology"; Dr. Samuel Bloom, associate professor of sociology, State University of New York, Downstate Medical Center, "The Sociology of Medical Education," and Dr. James M. Weiss, professor and chairman, Department of Psychiatry, University of Missouri, "Psychiatric Problems Associated With Aging."

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Side effects: Although there has been no evidence of tolerance, withdrawal symptoms or excessive self-medication, 'Soma' Compound and 'Soma' Compound with Codeine, like other central nervous system depressants, should be used with caution in addiction-prone individuals. While codeine addiction is relatively rare and easily broken, the same precautions must be observed as for any other opium alkaloid. Nausea, vomiting, constipation and miosis are possible codeine side effects. Should symptoms of hypersensitivity occur, discontinue medication.

Contraindications: None reported.

Complete product information available in the product package, and to physicians upon request.

Dosage: Usual dosage is 1 or 2 tablets 4 times daily.

Supplied: 'Soma' Compound is available in orange, scored tablets; bottles of 50. 'Soma' Compound with Codeine (narcotic order form required) is available in white, lozenge-shaped tablets; bottles of 50.

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Complete data with each 10cc vial. Therapy chart on request.

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Appointments

Appointment of Miss Mildred A. Hilliard as director of Nursing Service at St. Louis University Hospitals and as assistant professor of nursing at St. Louis University's Department of Nursing has been jointly announced by Sister Mary Geraldine, S.S.M., dean, St. Louis University School of Nursing and Health Services, and Mr. John B. Warner Jr., director, St. Louis University Hospitals.

In her new position, Miss Hilliard is coordinating nursing services at Firmin Desloge Hospital and David P. Wohl Memorial Mental Health Institute with other departments. She is also participating in the Department of Nursing's clinical, undergraduate and graduate programs within the teaching hospitals.

After receiving her nursing diploma, Miss Hilliard studied at St. Louis University, where she received the B.S. in Nursing and M.S. in Nursing Education degrees.

She was employed at DePaul Hospital as medical surgical coordinator from 1958 to 1964, where her most recent work included the revision of the curriculum in the medical-surgical area.

Miss Hilliard is well known in the community for her work in the organization and establishment of the Rehabilitation Center at Jewish Hospital. She was head nurse of surgical nursing at City Hospital during her early nursing career.

She was in the U. S. Army Nurse Corps from 1941 to 1947, and was attached to the 70th General Hospital Unit (St. Louis University Unit). She saw service in Africa, Italy, Austria and Germany.

She is a member of the National League for Nursing and the American Nurses Association.

In the News

The Rev. Edward J. Drummond, S.J., Vice President for the Medical Center of St. Louis University, has been elected vice chairman of the executive committee of the Federation of Regional Accrediting Commissions of Higher Education, a newly formed organization.

The federation is composed of six regional associations, which are the commissions on institutions of higher education throughout the United States.

As chairman of one of these commissions, the Commission on Colleges and Universities for the North Central Association, Father Drummond was involved in the development of the new federation.

(Continued on page 400)

ain is almost invariably a presenting symptom in cases of skeletal muscle *spasm*

In some instances, the pain subsides on relaxation of the muscles in spasm. In others, relaxant therapy alone fails to give adequate relief, and supplementary analgesia (and possibly sedation) are indispensable, as in cases of:

provocative pain, when muscle spasm is triggered by some painful underlying musculoskeletal defect.

residual pain, when relaxation of severe spasticity leaves a degree of myalgia that tends to reinvoke spasm.

severe pain, when the degree of pain is such as to cause persistence of symptoms in spite of relaxant therapy.

emotionally aggravated pain, when anxiety or agitation creates tension that thwarts the efficacy of both relaxant and analgesic medication.

In such cases, Robaxisal and Robaxisal-PH have proven highly effective in assuring decisive and comprehensive relief. The Robaxisal formula—of Robaxin (methocarbamol), the potent muscle relaxant, together with aspirin, the time-tested and proved analgesic—produces higher plasma salicylate levels than equivalent doses of aspirin alone, and serves effectively to control both spasm and pain. Robaxisal-PH's combination of Robaxin (methocarbamol) with the analgesic-sedative ingredients of the Phenaphen formula—including phenobarbital—helps additionally to ease apprehension.

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–a two-headed dragon!

Robaxisal and Robaxisal-PH are indicated in strains and sprains, painful disorders of the back, "whiplash" injury, myositis, pain and spasm associated with arthritis, torticollis, and headache associated with muscular tension.

Side effects such as lightheadedness, slight drowsiness, dizziness and nausea may occur rarely in patients with intolerance to drugs, but they usually disappear on reduction of dosage.

Contraindicated for patients hypersensitive to any component of the formulations. There are no specific contraindications to methocarbamol, and untoward reactions are not to be expected.

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Dr. Robert D. Mattis, professor of Ophthalmology, was recently named president-elect of the Missouri State Opthalmological Society. Dr. Winfred L. Post, Joplin, is new president. About 50 charter members belong to the scientific society. Dr. Mattis recently was guest lecturer at the University of Missouri School of Medicine. He participated in a postgraduate program entitled "Ophthalmology in the Practice of Medicine."

Dr. Edmund A. Smolik, associate professor of surgery, Department of Neurosurgery, presented a paper before the 12th annual meeting of the Houston Neurological Society in Houston. Dr. Smolik also served as co-chairman for the Southern Neurosurgical Society's annual meeting held at the Chase-Park Plaza Hotel.

Dr. C. Rollins Hanlon, director, Department of Surgery, attended the meeting of the American Surgical Association held at the Homestead in Hot Springs, April 1 to 3. Dr. Hanlon also attended a meeting of the American Board of Surgery held there from March 30 to April 1.

Dr. Francis X. Paletta, professor of clinical surgery, participated in a postgraduate program at the University of Kansas March 16 and 17. He lectured on "Head and Neck Cancer and Head Injuries."

Dr. Maurice Green, professor of microbiology, was invited to speak on his research before the Sixth Annual Seminar for Science Writers sponsored by the American Cancer Society in April. The Seminar was held at Palm Beach Shores, Fla.

Dr. T. E. Lauer, assistant professor of law, School of Law, University of Missouri, Columbia, delivered the annual LeRoy Sante lectureship sponsored by Phi Rho Sigma Medical Fraternity. His subject was "Malpractice in Medical Emergency."

UNIVERSITY OF MISSOURI

Receives Citation of Merit

Milton D. Overholser, M.D., Ph.D., professor and chairman of the Department of Anatomy at the University of Missouri School of Medicine, was presented a citation of merit by the University Medical Alumni at the annual Medical Alumni Luncheon in St. Louis. The award is given to an alumnus each year in recognition of his/her contributions in the field.

Recent reports suggest... insulin and sulfonylureas may accelerate lipogenesis,[1-5]... serum "insulin" levels are often elevated in obese diabetics[2,3,6]... DBI (phenformin HCl) reduces high blood sugars, lowers elevated "insulin" levels, tends to reduce body weight toward normal.[1,3,7-9]

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In the ketoacidosis-resistant obese diabetic not amenable to diet alone, hypoglycemic DBI (phenformin HCl) appears to help avoid weight gain or reduce adiposity, factors which otherwise tend to make blood sugar control more difficult and to increase the likelihood of complications. However, in the ketoacidosis-prone diabetic, insulin is still the essential hypoglycemic agent.

Summary: Indicated in stable adult diabetes, sulfonylurea failures and unstable diabetes. Gastrointestinal side effects occurring more often at higher dosage levels abate promptly upon dosage reduction or temporary withdrawal. Occasionally an insulin-dependent patient will show "starvation" ketosis (acetonuria without hyperglycemia) which must be differentiated from "insulin-lack" ketosis, and treated accordingly. Use with caution in severe liver disease. Not recommended without insulin in acute complications (acidosis, coma, infections, gangrene, surgery). Consult product brochure for full information.

Bibliography: 1. Williams, R. H.: Textbook of Endocrinology, Ed. 3, Saunders, Philadelphia, 1962, p. 610. 2. Gordon, E. S.: Metabolism 11:819, 1962. 3. Grodsky, G. M. et al.: Metabolism 12:278, 1963. 4. Sadow, H. S.: Metabolism 12:333, 1963. 5. West, K. M. and Tophoj, E.: Metabolism 10:689, 1961. 6. Yalow, R. S. and Berson, S. A.: Diabetes 9:254, 1960. 7. Weller, C. et al.: Scientific Exhibit, A.M.A., June 1962. 8. Weller, C. et al.: Metabolism 11:1134, 1962. 9. Radding, R. S. et al.: Metabolism 11:404, 1962.

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Trips and Talks

Dr. Phillip J. Marco, assistant professor in the Department of Psychiatry at the Medical Center, presented a film and discussed the psychologic and behavioral aspects of disaster to visiting physicians, civil defense and military personnel at UMMC. The meeting was sponsored by the State Medical Society, Division of Health and by the University of Missouri Medical Center. Dr. Marco also discussed the relation of psychodynamics and religion to a group of medical students and medical faculty at the Columbia Newman Center. The meeting was sponsored by the Medical Ethics Group.

Dr. Joseph Lamberti, assistant professor of psychiatry, and Dr. Phillip Marco conducted a psychiatric discussion of asthma to medical students, interns, residents and staff of the Department of Medicine of the Medical Center. The discussion included psychopathology dynamics, prognosis and treatment as they applied to specific patients discussed in medical grand rounds.

Dr. Fernando Tapia, associate professor of psychiatry, was a member of a panel at the state board meeting of the United Cerebral Palsy of Missouri at Bagnell Dam. Dr. Tapia made a 15 minute presentation on the community approaches to creating a sheltered workshop for the handicapped.

Dr. Richard M. Hyde, assistant professor of the Department of Microbiology, reported on research supported by the National Cancer Institute Contract on April 16, 1964 in Chicago. The sponsoring group is the American Association of Immunologists. The topic of discussion was "Immunoelectrophoretic Analysis of Sera From Animals Made Tolerant to a Mixture of Antigens."

Dr. Herbert S. Goldberg, professor of Microbiology, participated in the National Health Forum on "Health Needs in Our Environment" at Pittsburgh, Pa., and attended the Invitational Conference of National Board of Medical Examiners in Philadelphia.

Dr. Frank B. Engley, professor and chairman of the Department of Microbiology, visited governmental agencies in the Washington, D. C., area and attended a meeting of the Washington Branch, American Society for Microbiology. He also attended a joint committee meeting of the Missouri Public Health Association of Social Workers in Jefferson City.

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diabetic!

Dr. David G. Hall, professor and chairman of the Department of Obstetrics and Gynecology, gave a lecture on "Endometrial Diagnosis" at a meeting of the Tulsa County Medical Society in Tulsa, Okla. on March 9.

Dr. Samuel P. W. Black, professor of the Department of Surgery (Neurology) participated in a panel discussion at the Postgraduate Medical Education Symposium on "Neurological Problems in General Practice" held at the University of Missouri Medical Center on January 27. The discussion was relative to vascular problems of the brain and he spoke on "Space Occupying Lesions Within the Brain." He also was a panelist at a Clinical Pathological Conference presented at the meeting.

On February 26 Dr. John A. Buesseler, professor and chief of ophthalmology; Dr. Felix N. Sabates, assistant professor of surgery; and Dr. John W. Irvine, resident physician in surgery, attended an Awards Dinner sponsored by the Columbia Lions Club honoring the Columbia, Missouri, hospitals participating in the statewide eye donor collection substation program of the Lions Eye Tissue Bank of the University of Missouri. Certificates of recognition for cooperation with this program were presented to Dr. Milford Kubin, representing Ellis Fischel State Cancer, Mr. Kermit Crawley, representing Boone County Hospital, and Dr. Vernon Wilson, Dean of the University of Missouri School of Medicine, representing the University Medical Center. On March 9 Dr. John A. Buesseler and Dr. Felix Sabates attended as founding members the first general membership meeting of the Missouri Ophthalmological Society, Inc., at the Chase-Park Plaza Hotel in St. Louis. The meeting was held in conjunction with the annual meeting of the Missouri State Medical Association. Dr. Buesseler was elected to the Board of Directors and appointed Secretary-Treasurer of the Society.

Dr. William G. Hemenway, associate professor of surgery and chief of otolaryngology, lectured on the surgical treatment of cancer of the tonsil at Lackland Air Force Base, San Antonio, Tex. The meeting was sponsored by the Wilford Hall USAF Hospital.

Dr. Hal G. Bingham, assistant professor of surgery (plastic), discussed the history of plastic surgery with the local Phi Chi Medical Fraternity. He also presented a paper on "Renal Function Determinations in the Burned Patient With Acute Renal Failure" at the University of Kansas Medical Center. The Plastic Surgery Research Council sponsored the meeting. Dr. Nathan Gal-

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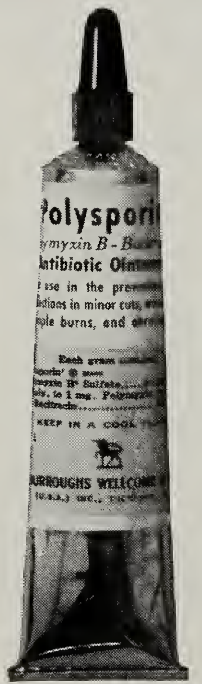

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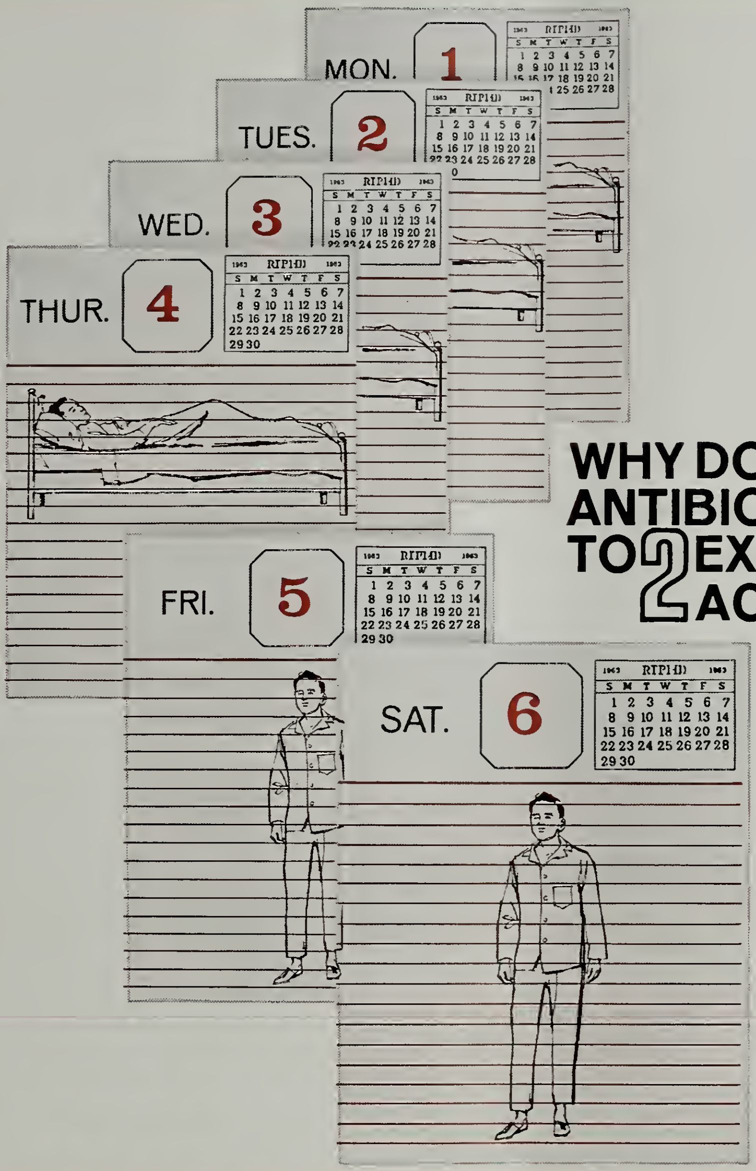

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loway, assistant professor of medicine, attended the meeting with Dr. Bingham.

Dr. John H. Landor, associate professor of surgery, attended the annual meeting of the Central Surgical Association in Rochester, Minn., and was elected to membership in the association.

ELLIS FISCHEL STATE CANCER HOSPITAL

A joint meeting of the alumni, staff and consulting staff of the Ellis Fischel State Cancer Hospital will be held at the Hospital on May 30, 1964, from 1:00 to 5:00 p.m., and on May 31, from 9:00 a.m. to 12:00 noon. The professional program to be announced will cover current work in cancer by the participating groups. All interested members of the profession are invited to attend.

Dr. Carlos Perez-Mesa, pathologist at Ellis Fischel State Cancer Hospital, was awarded a research grant by the National Institutes of Health on "Adjuvants in the Treatment of Bladder Carcinoma."

WASHINGTON UNIVERSITY

Presidential Commission Appointee

Dr. Edward W. Dempsey, dean of Washington University School of Medicine was appointed in March by President Lyndon B. Johnson to a presidential health commission. The commission, which is composed of distinguished laymen and physicians, will recommend steps that can be taken to reduce the disability and death rate from heart disease, cancer and stroke. It will be headed by Dr. Michael E. DeBakey of Baylor University.

Dr. Dempsey, who has been dean since 1958 and head of the department of anatomy at Washington University since 1950, also serves as a member of the National Advisory Health Council to Surgeon General Luther Terry. He recently visited Russia for six weeks observing medical education with a group of six American medical school deans.

New Faculty Members

Dr. Stanford Wessler, now a faculty member of Harvard University Medical School, has been named director of Jewish Hospital's department of medicine and professor of medicine at Washington University School of Medicine. The appointments are effective July 1.

"With Dr. Wessler's arrival, the association between Washington University School of Med-

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icine and Jewish Hospital will be considerably strengthened," Dean Edward W. Dempsey said. Jewish Hospital is a member of the Washington University Medical School and Associated Hospitals Medical Center.

Dr. Wessler is director of the Harvard Clinical Research Center for Thrombosis at Beth Israel Hospital in Boston and assistant professor of medicine at Harvard. He is associate editor of *Circulation,* official journal of the American Heart Association. He has published more than 100 articles and is well known for his investigations of blood coagulation and arteriosclerosis. He is a diplomate of the Board of Internal Medicine, and a fellow of the American College of Physicians. He was graduated from Harvard University in 1938 and received his M.D. degree from New York University in 1942.

Two new faculty members of the School of Medicine have received grants from the U. S. Public Health Service for support of their research. They are Dr. Sven G. Eliasson, who has been appointed associate professor of neurology, and Dr. D. Joseph Demis, who has been named associate professor of medicine and head of the division of dermatology. Dr. Eliasson has been associate professor of medicine in neurology at the University of Texas Southwestern Medical School. Dr. Demis has been serving as chief of the department of dermatology at Walter Reed Institute of Research for the past three years while serving in the Army Medical Corps.

Dr. Eliasson will continue research under a new grant of $15,000 from the U. S. Public Health Service, studying peripheral nerve complications of diabetes. Previous studies on these complications have been hampered by lack of an experimental model. Such a model has now been found and is now being used by Dr. Eliasson to investigate the way in which the nerves are damaged by diabetes and why the damage is not generally controlled by insulin. Dr. Eliasson holds an M.D. and Ph.D. in physiology degrees from the University of Lund, Sweden. In addition to Southwestern Medical School, he has served on the faculties of the University of Lund and the University of California at Los Angeles.

Dr. Demis will conduct a study of histamine metabolism in several allergic skin conditions and related diseases under a grant of $45,000. Histamine is believed to be responsible for many of the symptoms associated with types of diseases such as hives, eczema and dermatitis. Dr. Demis will evaluate new forms of treatment for these diseases and study histamine and its host cell, the mast cell, as related to the symptoms.

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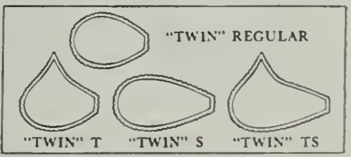

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Dr. Demis recently received the Army Commendation Medal at ceremonies at Walter Reed Institute of Research. He was cited as having made many outstanding contributions while chief of dermatology including an expedition directed toward the eradication of an endemic disease that has been present for centuries in a South American country. Dr. Demis received his Ph.D. in pharmacology from the University of Rochester and his M.D. from Yale University School of Medicine. He joined the Army Medical Corps in 1957, after graduation from Medical School.

Grants

More than $2 million has been awarded to investigators at Washington University School of Medicine by the U. S. Public Health Service within the last three months for research and training. From the $2 million, $329,979 will be used for new projects. Included in this are research career development awards for Dr. Stephen Kinsky, assistant professor of pharmacology, and Dr. William Sherman, research assistant professor of biochemistry in psychiatry. These special awards go to young faculty members who show promise in investigative fields.

Largest grant among new projects is for $62,267 for a study of human myoglobin, a protein of muscle similar to hemoglobin in the blood. Investigator for the project is Dr. Gerald Perkoff, associate professor of medicine, who will conduct the research at St. Louis City Hospital where he heads the Washington University internal medicine service. Myoglobin is reduced in amount in certain muscle diseases, such as muscular dystrophy and some forms of myositis. Dr. Perkoff will undertake biochemical and metabolic studies to attempt to find the reason for the decreased amount of this oxygen carrying protein.

Grants of approximately $30,000 each have been awarded to Dr. William Danforth, assistant professor of medicine, and Dr. Ernst Friedrich, instructor in obstetrics and gynecology. Dr. Danforth's work will concern analyses of enzymes within the heart muscle. Dr. Friedrich will study tissues within the female reproductive tract of animals. He hopes to correlate this information with data obtained from examination of human tissues to provide information on changes resulting from hormone treatment of the female for sterility and various types of cancer.

Dr. Jerome Levy, instructor in surgery, has received a grant of $20,918 for study of liver mitochrondria, small bodies within the cell, from patients having surgical or obstructive jaundice as compared to those having other types of jaundice or no jaundice. He will utilize a complex sensing device, the oxygen electrode, to measure the activity of these mitochondria.

Dr. Hulda J. Wohltmann, assistant professor of pediatrics, will use a $16,000 grant to develop a bio-assay test for insulin based on changes in permeability of frog skeletal muscles to sugar. This assay will be used to study the natural course of juvenile diabetes.

Dr. William Sherman, assistant professor of psychiatry, will study structural and metabolism of sphingolipids, with a $6,000 award. The sphingolipids are normal body constituents which are particularly abundant in brain white matter.

Alumni Day Activities

A capacity crowd, a varied and interesting clinical program and an entertaining evening are all promised for the Washington University School of Medicine's annual Alumni Day to be held Friday, June 5, according to Dr. Edward Reinhard, 1939, president of the Alumni Association.

The day will start with an informal breakfast at 8:30 to 9:15 a.m. in the Crest Room of Wohl Hospital. The clinical program, which will be held in Clopton Amphitheatre of Wohl Clinics, will begin at 9:30 a.m. and conclude at 3:30 p.m. Dr. Heinz Haffner, 1935, president-elect of the association, has served as program chairman.

Clinical presentation will include: "The Horizons of Medicine," Major General James H. Forsee, USA (Ret.) 1929; "Problems in Selective Chemotherapy and Toxicity," Dr. Arnold D. Welch, 1939, Eugene Higgins Professor of Pharmacology, Yale University School of Medicine; "Developments in Adolescent Psychiatry," Dr. Donald C. Greaves, 1949, professor and head of the department of psychiatry, The University of Kansas School of Medicine; "Renal Homotransplantation," Dr. Gilbert Hermann, 1954, instructor in surgery, University of Colorado School of Medicine; and "Respiratory Physiology Research as Part of the Dolphin Communication Study," Dr. Eugene Nagel, 1959, instructor in anesthesiology, University of Miami School of Medicine.

A discussion of "Carcinoma of the Breast" will be moderated by Dr. Harvey Butcher, associate professor of surgery, and cancer coordinator and director of the division of tumor service at Washington University. Panelists will be Dr. Charles L. Eckert, 1939, professor and chairman of the de-

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partment of surgery, Albany Medical College; Dr. Elmer B. Miller, 1943, instructor in surgery, Wayne University School of Medicine; Dr. William T. Moss, 1944, director of therapeutic radiology at Chicago Wesley Memorial Hospital; and Dr. Walter C. Bauer, 1954, assistant professor of pathology at Washington University.

A symposium on "Recent Development in Ophthalmology" will also be presented by the staff of the ophthalmology department at Washington University.

The Dean's annual luncheon for medical alumni and faculty will be held in the penthouse of Olin Hall from noon to 1:30 p.m. Department heads of the Medical School are arranging to open their departments to visiting alumni during reunion time, June 4 to 6. Specially designated "hosts" have been appointed to conduct visitors through the departments and tell them of the work going on in the various research areas.

A tour of St. Louis will be available for alumni wives on June 5. The tour will present St. Louis in its bicentennial celebration from "A Woman's Eye View." It will be arranged by the Women's Association of the St. Louis Symphony Society.

The annual Medical Alumni Banquet for both visiting physicians and their wives will be held that evening in the Khorassan Room of the Chase-Park Plaza Hotel. Cocktails will start at 6:30 p.m. and dinner at 7:30 p.m. Entertainment will be by the St. Louis Ragtimers of the Natchez Queen in Gaslight Square. The program will combine the history of ragtime and its many Missouri origins, along with the lively music of the ragtime era played in authentic style. Dancing will follow until 1:00 a.m. with the Russ David orchestra.

Medical School classes holding reunions this year and their chairmen are: 1959—Dr. Albert Rhotan; 1954—Dr. Gerald Behrens; 1949—Dr. Robert Lund; 1944—Drs. Virgil Loeb Jr. and Eugene Pennington; 1939—Drs. Benjamin Milder and Walter Baumgarten Jr.; 1934—Dr. Stanley Hampton; 1929—Drs. Guerdan Hardy and Burchard Pruett; 1924—Dr. Louis H. Jorstad. The classes of 1919 and 1914 will hold reunions also.

Tickets for the ladies' tour will be $5.50 per person including the luncheon. Tickets for the Medical Alumni Banquet are $7.50 per person. Reservations may be made by calling the Medical Alumni Office, FO7-6400, extension 823, in St. Louis.

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1. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962. **2.** Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. *J. Amer. Geriat. Soc.* 11:945 (Oct.) 1963.

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LEO H. POLLOCK, M.D.

Missouri Medicine in Review

FORTY YEARS AGO

The Springfield Session will be held May 6, 7, 8. The program committee has invited several guests, famous throughout the nation for their accomplishments and their interest in the organized medical profession. They are: Dr. W. Allen Pusey, president-elect of the American Medical Association and famous for his work in diseases of the skin; the speaker of the House of Delegates of the American Medical Association, Dr. F. C. Warnshuis, Grand Rapids, Mich. Another guest will be one of our own people transplanted to Baltimore, Md., Dr. W. E. Dandy, formerly of Sedalia, now professor of clinical surgery in Johns Hopkins Medical School. Dr. Dandy has become famous for his remarkable achievements in brain surgery.

The State Eleemosynary Board is to be commended for its action in appointing Dr. George A. Johns, of St. Louis, to the position of state health supervisor made vacant last December by the resignation of Dr. George A. Ard.

TWENTY-FIVE YEARS AGO

Dr. Cyrus E. Burford, St. Louis, was elected President-Elect of the Missouri State Medical Association by the House of Delegates at the Excelsior Springs Session, April 10, 11 and 12. Dr. Burford will serve as President-Elect during this year and will be installed as President at the Joplin Session in 1940. Dr. Burford received his preliminary education at Central College, Fayette, obtaining a Ph.B. degree. An honorary degree of LL.D. was later bestowed on him by that school. He has maintained an interest in the school and is at present chairman of the Board of Curators of Central College. In 1902 Dr. Burford received his medical degree the year following the union of the Marion-Sims College of Medicine and the Beaumont Hospital Medical College to form the Marion-Sims-Beaumont Hospital Medical College and the year before the school became the St. Louis University School of Medicine. He holds the Chair of Urology of the St. Louis University School of Medicine.

At the 82nd Annual Session Dr. James R. McVay, Kansas City, was installed as President at the Wednesday afternoon session of the House of Delegates and will preside at the 1940 Session which will convene in Joplin. The Clay County Medical Society proved itself an excellent host as it had done when the Session convened there in 1935.

The American Medical Association will convene in St. Louis May 15 to 19 for the 90th Annual Session. This is the sixth time the American Medical Association has met in St. Louis, the last St. Louis Session being in 1922. Dr. Irvin Abell, Louisville, is President of the Association and Dr. Rock Sleyster, Wauwatosa, Wisconsin, President-Elect, will be installed as President at the Opening General Meeting on Tuesday evening. Dr. James R. McVay, Kansas City, President of the Missouri State Medical Association, and Dr. Alphonse McMahon, St. Louis, President of the St. Louis Medical Society, the host society, will appear on the program Tuesday evening welcoming the American Medical Association to St. Louis.

TEN YEARS AGO

The budget for the fiscal year beginning May 1 for Kansas City hospitals calls for over $250,000 more than the original appropriation. Among other items requiring the increase was that the per diem cost per patient at Kansas City General Hospital was nearly $12.00. This cost is considered to be low because of the large wards, mass purchasing of commodities and volunteer professional aid.

The *Bethany Times* featured an article by Conwell Carlson of the *Kansas City Star* on the career of Dr. Lake Brewer of Ridgeway. Dr. Brewer has practiced in Ridgeway since 1908 and is now the only physician in that city.

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WASHINGTON

HEALTH INSURANCE GAINS

In 1963, every state in the nation had a sizable increase above the previous year in total health insurance benefits paid to insured persons by insurance companies, the Health Insurance Institute said in its annual estimate of benefits by states.

The amount of health benefits paid to the American public by insurance companies in 1963 totaled $4,151,589,000, an increase of 10.3 per cent over the $3,763,000,000 distributed the year before, the Institute said.

In Missouri a total of $100,053,000 was paid in 1963, 11 per cent more than the $90,118 paid in 1962.

Including Blue Cross, Blue Shield and other health plans, 1963 benefits totaled $7.8 billion, up from $7.1 billion in 1962.

States with sizable above-average benefit increases included North Dakota, 15.6 per cent; Vermont, 13.9; Delaware, Florida and Mississippi each with 12.8; Iowa, 12.5; Kansas, 12.4, and Oklahoma, 12.1.

By region, the Institute said the Midwest led followed by the South, Northwest and the West. The 12 states of the Midwest received an estimated $1,352,586,000 in health insurance benefits from insurance companies last year as compared to $3,225,578,000 received in 1962. This represents a 10.4 per cent increase for the states of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin.

The South, while second to the Midwest in benefits with an estimated $1,054,920,000, was first in the rate of increase with an 11.4 per cent rise over the $947,369,000 paid in 1962.

The 16 state region includes Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia and the District of Columbia.

The nine Northeast states were third in total benefits paid by insurance companies with an estimated $992,230,000. This represents an increase of 9.7 per cent over the $904,481,000 paid in 1962 in Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.

The 13 Western states climbed from $685,572,000 in 1962 to an estimated $751,853,000 for 1963, an increase of 9.7 per cent for Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

The two most populous states, California and New York, led in total benefits received. California was first with an estimated $509,402,000, a 9.4 per cent increase. New York was second with an estimated $412,668,000 or 9.6 per cent over 1962.

NURSES' TRAINING

The Administration asked Congress to authorize a five year, $260 million plan of federal aid designed to increase the number of nurses in the United States.

The plan called for federal grants and loans for construction of nursing schools and training of nurses.

The American Medical Association approved in principle the construction provision but opposed loans and scholarships for nursing students.

Under the Administration plan, a total of $110 million would be spent during a four year period on grants to construct new schools of nursing and to replace and expand existing schools. Another major feature of the bill encompassing the plan calls for spending $85 million over five years on loans to nursing students. A "forgiveness feature" would apply to 60 per cent of the loan.

To improve nurse training and service, project grants totaling $58.8 million would be allocated over five years to public and nonprofit agencies.

Other funds would be spent on planning grants to help states develop nursing programs and a limited undergraduate scholarship program.

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References: 1. Szymanski, F. J.: *Indust. Med.* 30:498, Nov., 1961. **2.** Wexler, Louis: *Clin. Med.* 70:404, Feb., 1963. **3.** Hodges, F. T.: *GP* 14:86, Nov., 1956. **4.** McLean, I. E. D.; Graham, K. T., and East, M. O.: *Practitioner* 189:82, July, 1962.

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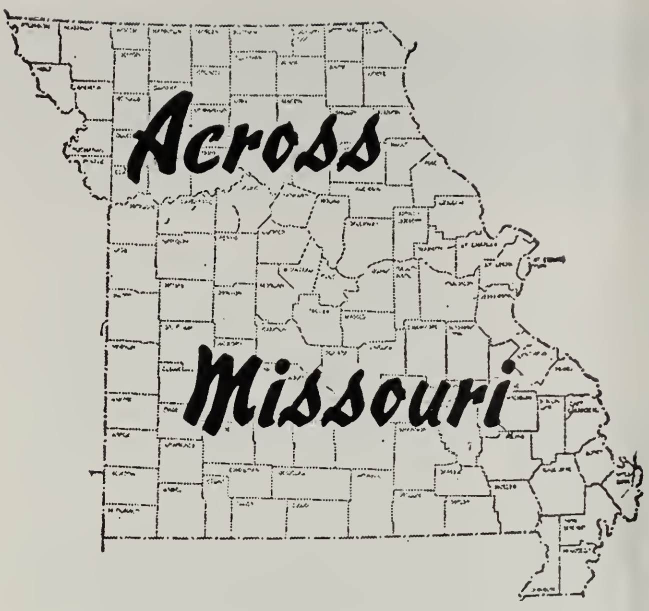
Across Missouri



AMA-ERF Checks Presented

Missouri's three medical schools were presented with checks totaling approximately $35,000 by the American Medical Association Education and Research Foundation on April 15.

Leonard T. Furlow, M.D., St. Louis, President of the Missouri State Medical Association, presented the grants to the deans of the schools at a luncheon at the University Club, St. Louis.

Vernon E. Wilson, M.D., dean of the University of Missouri School of Medicine, received $5,944.24; Edward W. Dempsey, Ph.D., dean of Washington University School of Medicine, received $13,106.41, and Armand E. Brodeur, M.D., associate dean of St. Louis University School of Medicine, representing Dean G. O. Broun Sr., M.D., received $15,287.17.

Dr. Furlow presents AMA-ERF checks to Drs. Brodeur, Dempsey and Wilson.

These grants are part of the $1,208,463 contributed in 1963 to the AMA-ERF Fund for medical schools by physicians, their families and allied groups such as the Woman's Auxiliary. Deans of the schools may use the money at their discretion for special projects or expenses outside their budgets.

The AMA-ERF program was established by the American Medical Association in 1951 to give physicians a greater part in the financial support of the nation's medical schools. Administrative costs of the fund raising program are assumed by the AMA and its constituent societies and none of the contributed money is used for collection and distribution expenses.

During the last 12 years, more than $14 million has been distributed to medical schools through AMA-ERF. In addition, the Foundation gives financial support to a variety of medical education and research programs including student scholarships and loans and grants to medical research workers.

Contributors to the program may designate a specific school to receive their gift, or may give without designation and have the contribution divided among medical schools. Included in this year's Missouri grants was $1,546.33 designated by donors for the University of Missouri, $8,708.50 for Washington University and $10,889.26 for St. Louis University. A gift of $4,397.91 was made to every four year medical school in the nation from the undesignated contributions.

National Fund for Medical Education

For the year 1963 the schools also received money from the National Fund for Medical Education. The University of Missouri School of Medicine received $25,570; Washington University School of Medicine $26,305, and St. Louis University School of Medicine $30,120.

Organized in 1949 under the sponsorship of university presidents, the American Medical Association and the Association of American Medical Colleges, the National Fund seeks to mobilize new sources of voluntary support for the teaching budgets of the nation's accredited medical schools. A charter was granted by Congress in 1954.

The objectives of the National Fund include: "To strengthen the nation's ability to survive by training a sufficient corps of skilled men and women to care for the people's health and medical needs. . . . To interpret the needs of medical education to the American public. . . . To encourage the development and advancement of constantly improving standards of medical education. . . . To preserve academic freedom for medical education."

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C. G. STAUFFACHER, M.D., Secretary

Missouri Academy of General Practice

The recent Atlantic City Annual Meeting of the AAGP drew a registration of 1,854 physicians with a total registration of 4,470. This is a marked drop-off in registration figures from the last two annual meetings. The new President installed during this session is Dr. Julius Michaelson of Foley, Ala. The new President-elect of the AAGP is Dr. Amos N. Johnson of Garland, N. C. Dr. Herman E. Drill of Hopkins, Minn., was elected Vice President. The Speaker of the Congress of Delegates, Dr. Carroll Witten of Louisville, Ky., was reelected for his fifth term in this position. Dr. John Ely of Spokane, Wash., was elected Vice Speaker. At its organizational meeting, Thursday, April 16, the Academy's Board of Directors named as Chairman Dr. Herman Drill, newly elected Vice President. He succeeds Dr. Amos Johnson.

Some of the actions taken by the Congress of Delegates are as follow:

Rejected a proposal to retreat from a position taken four years ago to raise educational requirements for admission to the Academy. The proposal would have deleted from Chapter I, Section 2 of the By-Laws the requirement of two years of hospital training for Academy membership after 1965.

Rejected a proposed "fellow" classification of membership on the basis that it would divide Academy membership; it would not provide any additional prestige in a member's relationships with his patients or his colleagues; it would not improve the member's knowledge or qualifications for practice.

After considering numerous resolutions expressing dissatisfaction with the new definition of continuing education requirements adopted last year, the reference committee on education recommended adoption of a substitute resolution which would require each member to submit evidence of 150 hours of "approved study" each three years . . . at least 25 hours to be obtained at meetings organized and conducted by the Academy or one of its constituent chapters.

Upon motion from the floor the Congress voted to refer the substitute resolution as well as Resolutions Nos. 1 through 7 to the Commission on Education for study and report back to the 1965 Congress of Delegates.

The reference committee on reports of officers and committees heard much heated discussion on the proposal to change the name to "The American Academy of Family Physicians," however, the Congress voted to retain the present name.

Endorsed the recommendations of Academy President, A. E. Ritt, that the Academy must support only one program of graduate medical education, making obstetrics and surgery mandatory.

A recommendation of the Commission on Education was adopted which proposes that each state chapter with a medical school in its area seek to establish one or more of the following programs in such schools: a. preceptorships, b. lectures and seminars, c. family care clinic, d. comprehensive care supervision by practicing physicians in out-patient department.

The Congress failed to take any action on a resolution urging the Academy to go on record as favoring warning labels on all tobacco products, listing the principal dangers involved, elimination of all misleading advertising directed toward influencing people to take up the tobacco habit and requesting doctors to assume the responsibility for advising their patients of the hazards involved in the use of tobacco.

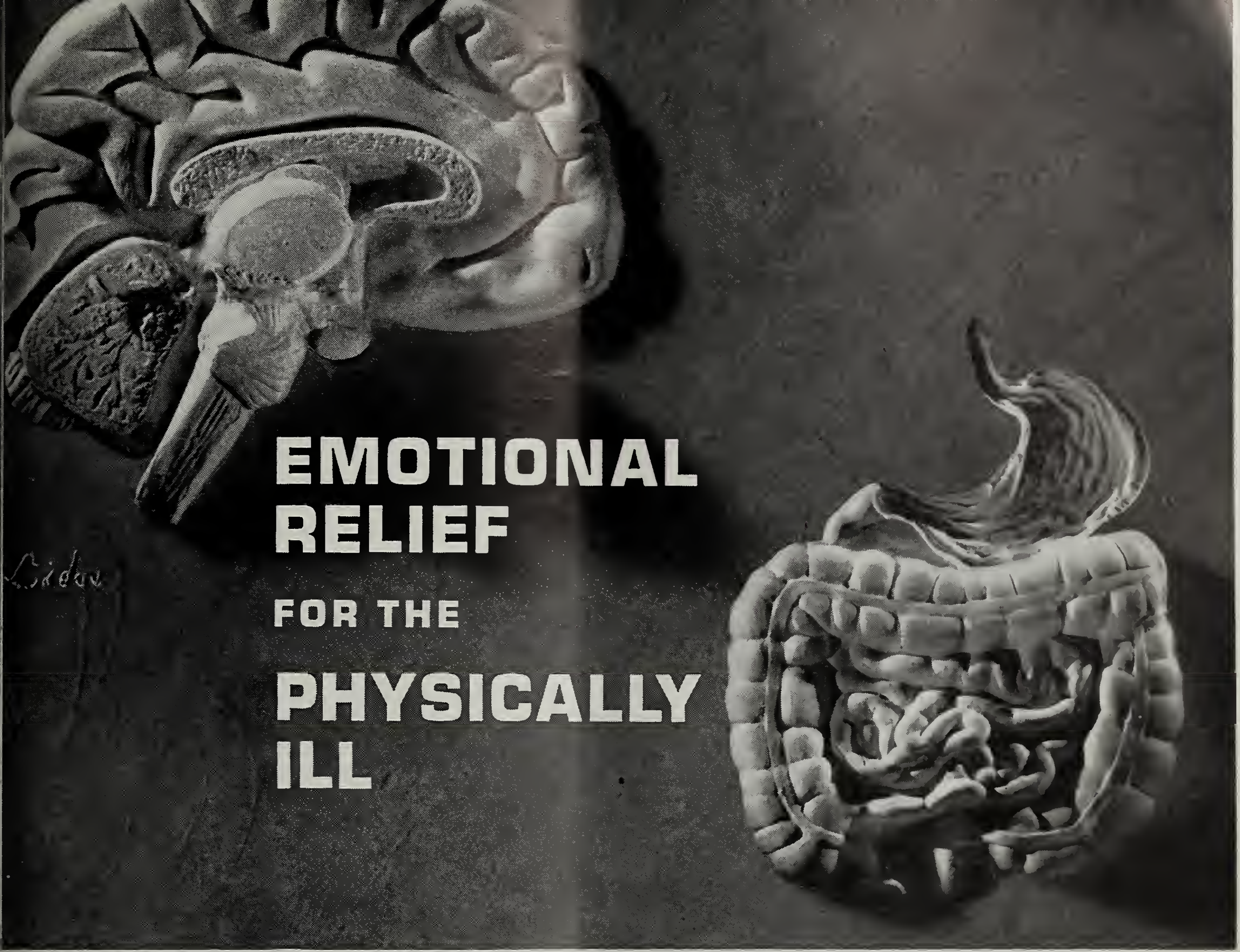
The delegates adopted the reference committee's recommendation that the resolution not be adopted until further evidence has been evaluated.

Endorsed the Board's action in authorizing use of Commission on Hospital funds to have members of the commission investigate pertinent instances of hospital privilege trouble arising within their geographical areas. Requests for such assistance should be made by the state chapter officers to the commission member representing the regional area.

Also approved was establishment of a special fund to be used to support state or local units of the Academy in court action involving problems in hospital privileges when such have broad national significance within certain stipulations to safeguard the fund.

Urged state chapters to increase participation in state medical society and AMA activities and more vigorous participation by Academy members in county medical societies to obtain great-

(Continued on page 470)



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Woman's Auxiliary

Why not check your calender again for June 21 to June 25? There is still time to join the "caravan" heading for the National Auxiliary Convention in San Francisco, one of the most cosmopolitan cities in the world.

Mrs. Delevan Calkins

Those who were privileged to meet and hear our dynamic National President, Mrs. C. Rodney Stoltz, when she was in St. Louis can anticipate worthwhile sessions in Cailfornia. Dr. Paul McCleave, head of the AMA Department of Medicine and Religion, will be the narrator in a program "When Spiritual Guidance Helps" in which three clergymen representing the Catholic, Jewish and Protestant faiths will participate. Dr. Ever Curtis, a well known woman speaker of the AMA's bureau whom I heard when visiting at the Kentucky State meeting last year, will have "Legislation" as her subject. She is a fine speaker. On Sunday afternoon at the tea honoring Mrs. Stoltz and Mrs. William H. Evans, President-elect, there will be Chinese and Occidental models showing us how beautiful Chinese robes and costumes can be converted to our American mode of dress, both for sport and formal occasions.

Mrs. Ralph Bohnsack, our very gracious president-elect, will be chairman of the delegates. The delegates are: Mrs. Carl R. Ferris, newly installed president of Jackson County; Mrs. Josiah H. Walton, fourth district director; Mrs. Stanley S. Peterson, National Regional Program Chairman; Mrs. Robert E. Dunshee, M-A-L, and Mrs. Arthur W. Neilson, St. Louis City. The alternate delegates are Mrs. Doyle C. Whitman, Jackson County; Mrs. Paul Whitener and Mrs. Rudolph E. Catanzaro, St. Louis County; Mrs. Durward G. Hall, Greene County; Mrs. Thomas Burns, newly installed president of Boone County; and Mrs. Albert J. Campbell Jr., newly installed president of Pettis County. This group of active and interested women will serve us well and be inspired by the future goals and scope of the National Woman's Auxiliary.

You will all be glad to know that Mrs. Richard A. Sutter is on the slate of candidates for National Officers, 1964-65, as President-elect. She has been a dedicated and tireless Auxiliary worker on the local, state and national levels. We are pleased that this honor has come to her. Missouri is proud of you Betty! Your high ideals and vision will continue the progress of our national organization.

Mrs. William H. Evans of Youngstown, Ohio, will be installed as National President at the San Francisco meeting and has released her theme for the coming year: "Better Health—Better World" and as soon as possible after the convention new materials for programs will reach the state chairmen.

At our state meeting in March a special committee reported on the Auxiliary Medical Student Loan Fund and concluded thus: (a) they found that many doctors were supporting five loan funds to medical students; (b) that our financial records were poorly protected and irreplaceable if lost; (c) that the need had changed and the amount we could loan was inadequate; (d) that our pioneer work had been implemented by so many other groups that the need for our loan fund ceased to exist. After consideration by each auxiliary of means to dispose of the activity through other channels it was agreed by unanimous vote to terminate the Auxiliary Loan Fund and its records, assets and liabilities to be turned over to the Missouri State Medical Foundation for administration. The original purpose of aid to needy medical students is the prime consideration. Such a move we feel will give stability in communication since headquarters will be permanent at the MSMA office.

The committee, Mrs. Lawrence S. Crispell, Mrs. Mark M. Marks, Mrs. Carl R. Ferris, Mrs. Frederick E. Wade and Mrs. Henry C. Bauman, assumes that the good work started some 15 years ago assisting men who are now practicing medicine will continue to be effective. The total amount of cash and loans is approximately $13,000.

The Auxiliary and the MSMA say "thank you" for your studies as a committee and for your good counsel.

Remember this is an election year and we should contact our medical societies to help in carrying on the work of MMPAC and AMPAC.

Volume 61, Number 6—June, 1964

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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KENNETH L. RALL, M.D., *and* **GLENN L. McELROY, M.D.,** *Columbia;*
THEODORE E. KEATS, M.D., *Charlottesville, Va.*

A Study of Long Term Effects of Football Injury to the Knee

The results of a study of long term effects of football injury to the knee in 205 players are presented.

Drs. Rall and McElroy are with the Departments of Radiology and Orthopedic Surgery, University of Missouri School of Medicine; Dr. Keats is Chairman of the Department of Radiology at the University of Virginia.

The project was supported by a grant from the Department of Radiology Research Trust Fund.

With the growing national interest in physical fitness, it is becoming evident that the physician is becoming increasingly involved in the problem of prevention of athletic injuries and in counseling prospective players and their parents. Such counseling is often rendered difficult because of the lack of data dealing with long term effects of athletic injuries. Published material consists largely of compilations of acute injuries without studies of the secondary sequelae.[2–5]

American football is, without any question, the leader among all team sports as a cause of injury. It has been estimated that 50 per cent of the average high school football squad will suffer some type of injury serious enough to result in loss of one or more days of practice in a complete season.[4]

Emphasis on football is reaching into younger age groups, both in curricular and extracurricular activities. In some areas, this sport is intensively played in city and little league football teams. Parents familiar with the image of the former football player with painful knee disability often ask the physician's comment concerning the hazard of permitting their children to participate in tackle football.

The University of Missouri, a member of the Big Eight Conference, has had an active football program for many years. The location of the School of Medicine on the campus has provided the unique opportunity to undertake a study of the long term effects of football injury. Proximity to, and the close relationship with the Athletic Department has permitted study of the athletes on campus, and those of the alumni group in an attempt to provide data concerning long term effects of such injury.

Method

Because the knee is one of the most vulnerable joints of the body from the standpoint of athletic injury,[2] and since it probably has a higher incidence of residual malfunction after injury than any other trauma sustained in sports,[3] we elected to confine our study to this portion of the anatomy.

A questionnaire was sent to 350 former and present members of the University of Missouri football squad. Most of these men had been at the University within the last 10 years, but a few dated back as far as 30 years. The format of the questionnaire is shown in table 1.

TABLE 1

SAMPLE OF QUESTIONNAIRE SUBMITTED TO SURVEYED GROUP

NAME: ....

1. How Long Did You Play Football
    In High School Years ....
    In College Years ....
    Professional Years ....
    Position Played—Right or Left ....
2. Did You Ever Injure Your Knees in Football
    Which Knee ....
    When ....
    How Many Times ....
3. What Was Injured
    Cartilage Tear ....
    Ligament Injury ....
    Fracture ....
    Other ....
4. Was Surgery Performed
    At Time of Injury ....
    Number Years Later ....
    Where Was Surgery Done ....
    What Kind of Surgery Done ....
5. Any Symptoms Referable Now to Knees
    Pain ....
    Stiffness ....
    Swelling ....
    Grating Sensation ....
    Locking ....
    Giving Away Sensation ....
    Other ....
6. Age Now ....

Those players who presented evidence of knee injury were asked to obtain x-rays of both knees to include anteroposterior, lateral and stress films; the latter as a test for collateral ligament instability.

Results

Questionnaires completed totally or in part were returned by 205 individuals. The age of the response group ranged from 19 to 60 years with a mean of 28 years. The average number of years of football played by this group was 7.3 years, ranging from three to 12 years.

One hundred and five (51.2 per cent) players reported previous injury to the knee, without significant difference in side of involvement. Forty-nine (46.6 per cent) reported more than one injury to the knee. Information concerning the type of injury by history is of questionable value, but of interest. These are indicated in table 2.

TABLE 2

105 PLAYERS

Type of Injury	*Number*	*Per Cent*
Ligament Tears	39	37.1
Cartilage Tears	25	23.8
Cartilage and Ligament Tears	26	24.7
Fractures	4	3.8
Bursa Injury	2	1.9
Sprain	5	4.7
Hyperextension	3	2.8
Torn Muscle	1	.95

Thirty-seven (35 per cent) individuals had previous surgery to the knee varying in time from immediate post injury to 20 years later. We were unable to ascertain from the questionnaire an accurate accounting of the type of surgery performed.

Eighty-three (79 per cent) individuals reported persistent knee symptoms following injury. These are recorded in table 3. More than one complaint was registered by 51 individuals or 61 per cent. It is of significance that symptoms were more pronounced in those with multiple knee injuries.

TABLE 3

83 PLAYERS

Symptoms	*Number*	*Per Cent*
Pain	50	60.2
Stiffness	47	56.6
Giving Away	32	38.5
Grating Sensation	23	27.7
Swelling	16	19.3
Locking	10	12.0
Generalized Weakness	3	3.6

Roentgenograms of the knees were obtained in 44 individuals. The results of this survey are shown in table 4. As one would anticipate, many of these findings were multiple.

TABLE 4
44 PLAYERS

Radiographic Finding	*Number*	*Per Cent*
Mild Degeneration	20	45.4
Moderate Degeneration	8	18.2
Marked Degeneration	9	20.4
Chondromalacia Patellae	16	36.3
Loose Body	4	9.1
Ligament Instability	14	31.8
Soft Tissue Calcification	3	6.8
Negative	4	9.1

Both knees were examined and the non-injured or minimally injured knee was used as a standard for comparison with the injured joint. The criteria for the diagnosis of degenerative joint disease were: spurring of the tibial spines, spurring of joint margins, loss of joint space and eburnation of articular surfaces. The criteria for chondromalacia patellae were: narrowing of retropatellar space, irregularity and eburnation of patellar articular surface and hypertrophic lipping of patellar margins. Ligamentous instability was judged by abnormal widening of the medial aspect of the joint space in comparison with films of the opposite side. Loose bodies were detected both in the joint space and in the suprapatellar bursa. Soft tissue calcifications included myositis ossificans and Pellegrini-Stieda disease (figs. 1, 2, 3).

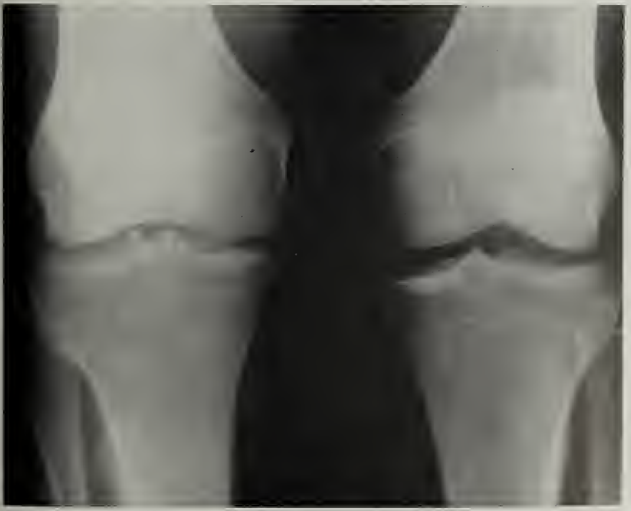

Fig. 1. G. R., aged 27, played football four years in high school, four years in college and three years semiprofessional. Sustained cartilage and ligament injury to right knee in 1949 and again in 1956. There was no radiographic evidence of injury to the left knee. The right knee shows marked lipping of joint margins and patella. There is abnormal widening of the medial aspect of the joint space when compared with the right.

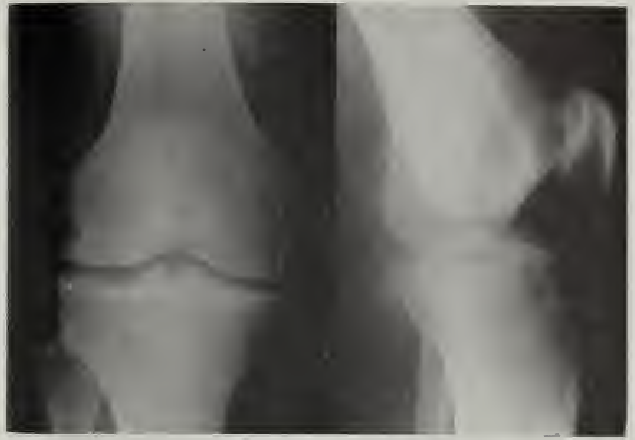

Fig. 2. D. P., aged 25, played four years in high school and five years in college. Sustained "cartilage tear" injury to left knee in 1958. No radiographic evidence of injury to right knee. Multiple loose bodies, narrow joint space and tibial spurs. Chondromalacia patellae.

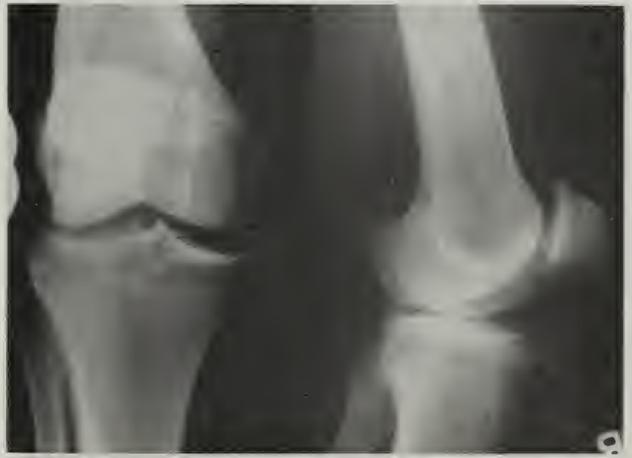

Fig. 3. N. K., aged 25, played four years in high school and three years in college. Injured right knee in spring of 1959 and fall of 1960. Ligament and cartilage tears. Left knee normal radiographically. Right knee shows narrowed joint space, hypertrophic lipping, flattening of femoral condyles, spurring of tibial spines and chondromalacia patellae.

DISCUSSION

Of the players who answered our questionnaire, 51.2 per cent presented a history of knee injury, a surprisingly high incidence. It is of interest to correlate the incidence of multiple injury with the severity of symptoms and positive radiographic findings. As one would anticipate, this correlation is high. One hundred ninety-nine men (46.6 per cent) had multiple injuries and of this group, all but one had persistent symptoms.

The correlation of persistent symptoms with radiographic manifestations of joint pathology is also high. Of the 44 men who had radiographic examinations, all but six (83.4 per cent) had x-ray evidence of joint pathology and usually these changes were multiple. This is of particular significance since the majority of these players are young and in an age group in which degenerative changes are not usually seen.

We were unable to find any significant relationship between previous surgery and the severity of clinical or radiographic findings.

These data indicate that knee injury is a common and serious problem in American football and one that needs the concerted attention of physicians, coaches, trainers and those concerned with the development of athletic equipment. In a recent report,[1] it was pointed out by the Committee on Medical Aspects of Sports of the American Medical Association that the amount of medical supervision of college athletics is deplorably low. One can assume that at the primary and secondary schools this situation is even more extreme, and perhaps of even greater significance, since in this group one must also consider the problem of epiphyseal fracture and possible growth disturbance in addition to the other hazards described.

It is obvious that stricter attention to the prevention and treatment of knee injury in football is necessary. This should include careful evaluation of the physical condition of the professional player by a physician who is familiar with the problem and more careful supervision of the injured player. The return of a player to active competition should receive more careful supervision in light of the apparent hazard of repeated damage.[2]

Progress in the prevention of injuries to other parts of the anatomy including the head, neck, face and shoulders, has reduced the frequency and severity of injury to these parts. Serious consideration should be given to the provision of suitable measures for protection of the knee from injury in football to favorably influence what appears to be unusually severe penalty of participation in this national pastime.

SUMMARY

A study of the long term effects of football injury to the knee has been presented. Of 205 football players surveyed, 105 (51 per cent) sustained repeated injury to the knee during their athletic career. Of those injured, 83 (79 per cent) reported persistent symptoms and radiographic changes of degenerative joint disease. These data indicate the necessity for measures to reduce this inordinate incidence of disability.

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Whipple's Disease

Whipple's disease is discussed from the viewpoint of manifestations, its clinical course and speculation over pathogenesis.

This is one of a series of seminars presented to the Medical House Staff, Jewish Hospital, St. Louis, edited by Michael M. Karl, M.D., Acting Director, Department of Medicine of the hospital.

As an unusual cause of malabsorption, Whipple's disease has excited the interest of clinicians because of its diffuse manifestations, the progressive clinical course and the speculation over pathogenesis.

In 1907, Whipple,[1] a pathologist at Johns Hopkins who later won the Nobel prize, described a previously undescribed disease in a 35 year old physician which he stated was characterized anatomically by deposits of fats and fatty acids in the small intestine and mesenteric lymph nodes. Clinically, his patient presented with loss of weight and asthenia, steatorrhea, indefinite abdominal signs, a peculiar polyarthritis, lymphadenopathy and pigmentation. Pathologically, he described the characteristic macrophages in the lamina propria of the small intestine, which he noted gave a negative reaction to fat stains and contained rod-shaped structures.

Thirty years elapsed before the next generally accepted case was reported by Jarcho, again from Johns Hopkins. By 1950 only 50 cases had been reported, some of which probably were not Whipple's disease. In the last 10 years another 50 cases have been reported.

Until 1949, the disease had been diagnosed only at autopsy.[2] Since then several factors have changed the prognosis and stimulated interest in the disease. In 1949 Black-Schaffer[3] carried out a histochemical study of the characteristic macrophages or foam cells and found that they were stained with periodic acid-Schiff reagent and that most of them were not stained with fat stains. Previously, the disease had been considered an abnormality of fat metabolism and the terms lipogranulomatosis intestinalis and intestinal lipodystrophy were used as synonyms for the disease. In 1950, Hendrix[4] reported a case in which the diagnosis was made antemortem on a mesenteric lymph node biopsy. Shortly thereafter, with the advent of the use of antibiotics and steroids in Whipple's disease, several prolonged remissions were reported.[5-9]

In 1958, Sierachi[10, 11] described in the macrophages sickle form particles, which were PAS positive. This stimulated interest in the morphology of the PAS material and the use of electron microscopy, which led to the demonstration by several workers[12-15] of small inclusion bodies in the macrophages and within the sickle form particles. These are the size of microorganisms. As a result of these developments, controversy is now raging over the etiology and pathogenesis. This will become more apparent.

Clinical Manifestations

The disease occurs predominantly in males with a proportion of four to one.[16] It is confined to the white race except for two cases which have been reported in Negroes.[17] It has been reported in siblings on two occasions.[18, 19] Gross has noted an increased incidence on mental illness and diabetes in relatives. The average age upon admission to the hospital is 45 years, but varies from 20 to 70 years. There have been two probable cases reported in teen-agers.[20] Rowland[21] reported two autopsied cases in infants which showed PAS positive granular histiocytes in the lamina propria, that he called asymptomatic Whipple's disease.

Clinically, the disease may be divided into two phases: the prodrome or the period of arthritis which lasts about four years, and the period of decline or diarrhea, which lasts six to 15 months and is the period of hospitalization.[22]

Arthritis is found in 61 per cent of patients and is the initial symptom in 50 per cent. Some arthralgia is found in nearly all patients. The arthritis is usually migratory and transient like that of rheumatic fever and rarely leaves any residual. Occasionally, it resembles rheumatoid arthritis and leaves a deformity. It always preceded the diarrhea.

Weight loss varying from 20 to 100 pounds and asthenia are almost always present, and at the time of admission the patient is usully emaciated. Vague abdominal symptoms are common. Postprandial epigastic and periumbilical distress and eructation are the most prevalent and the first to appear. Because of these complaints, many patients have had surgical procedures performed early in the course of the disease. Nausea and vomiting may occur.

Diarrhea is present in more than 90 per cent of patients. Constipation is present in 22 per cent, but usually alternates with diarrhea. Nocturnal diarrhea is sometimes a prominent complaint. Gross rectal bleeding occurs in about 5 per cent. Nonproductive cough occurs in one third of patients.

Chills and fever are found in one fifth of cases. Jaffe reported a patient who had chills and fever for 13 years before diagnosis. In three or four patients reported by Puite, fever associated with night sweats occurred. One striking feature of the history is that the patients are usually mentally alert and eat voraciously at the time of admission, which contrasts sharply with their emaciated physical appearance. Anorexia, however, eventually occurs.

Physical Findings

The most important findings on physical examination are hypotension, pigmentation, emaciation, lymphadenopathy and the abdominal abnormalities. Hypotension is found in two thirds of patients and is defined as a blood pressure of less than 100 mm. systolic. Skin pigmentation is present in two thirds of patients and varies in distribution and intensity. With the exception of one case,[23] it never occurs on the buccal mucous membrane.

Peripheral non-tender lymphadenopathy occurs in 40 per cent.[24] It may be generalized or localized to a group of nodes. Edema occurs in one third and purpura in one half of patients.

Abdominal examination is almost always significant. Distention is found in about one half of patients, a mass in one fifth and tenderness in one third. Ascites is usually not present. The mass, when present, is ill defined and variable in size and position. The tenderness usually is epigastric and mild. Rarely, abdominal examination is normal.[25]

A heart murmur is heard in about 16 per cent of the patients. Examination of the lungs is usually normal. Tetany has been reported. A pellagroid rash has been noted in some patients.[26] Rectal examination and sigmoidoscopy are usually normal, but may reveal tiny mucosal hemorrhages. Gastroscopy may be normal or show atrophy of the mucosa, if achlorhydria is present.

Laboratory Findings

It must be noted that in the early phases of the disease laboratory tests may be normal and during remission they characteristically return to normal. The abnormal findings are those of malabsorption in general and those peculiar to Whipple's disease. Occult blood and achlorhydria are much more common than in other causes of steatorrhea. Azotorrhea often is not present and, if present, is mild. The anemia is usually microcytic and hypochromic instead of macrocytic. Eosinophilia is sometimes present. Ketosteroids and 17 hydroxy and other tests of adrenal function when done have been normal or slightly low. Increased fecal porphyrins have been reported. These sometimes return to normal with remission. Johnson reported an increased pigment excretion in infants with increased fat intake, which suggested that increased fat in the intestine caused increased hemolysis of red blood cells, but the correlation with steatorrhea is not good. X-rays of the small intestine may show any of the changes of malabsorption including segmentation, flocculation, dilated loops of bowel or increased transit time.[27] The most specific for Whipple's disease is thickening of the mucosal folds in the mid-jejunum, giving an accordion-like appearance.[28]

Chemical or Metabolic Abnormality	*Per Cent*
Flat glucose tolerance curve	50-75
Calcium low (less than 9.5 mg. per cent)	10
Plasma proteins—low total	25
A/G ratio reversal	10
Cholesterol low	5
Achlorhydria	40
Electrolyte abnormality	Rare
Anemia	50
White blood count elevated	40-50
Sed. rate	15
I_{131} Triolein absorption abnormality	80-90
Eosinophilia	9
Occult blood	25

In most of the cases, the x-rays remain abnormal even during remissions, but Shatski reported a normal x-ray and biopsy eight years after remission.[29] Due to peritoneal lymph node enlargement, there may be displacement of the duodenal loop or of the ureter. Joints may show[30] degenerative changes and occasionally those of rheumatoid arthritis.

The patient usually presents with arthritis, diarrhea and weight loss, but may present bizarrely. Dellinger's patient[31] presented with only edema. Jaffe's case had polyarthritis and fever for 13 years. One of Chear's presented with abdominal pain. Hendrix's presented with syncope.

The course of the disease is characteristically downhill, and and the patients die of dibilitation, or of intercurrent infection. However, a number of patients have died suddenly without a cause being found. In Luton's patient[32] a potassium of 2.0 was found, and the patient responded dramatically to massive doses of KCL. He offers this as a possible explanation of the sudden death. With the use of steroids and antibiotics some remissions have occurred and thus these have changed the course of the disease.

PATHOLOGICAL FINDINGS

The pathologic findings are striking. Upon opening the peritoneal cavity, it is noted to be dull and gray. There is dilation, thickness and rigidity of the small intestine. The mucosa is often discolored and has a yellow flecked appearance due to enlarged villi. The extent of gross abnormality of the small intestine varies from only the jejunum being involved to the entire small and large intestine being diseased. The mesentery is thickened and there is lymphadenopathy of the mesenteric lymph nodes in every case. The lacteals may or may not be dilated. Polyserositis is present in most cases. Endocardial vegetations are present in one third of patients. Any of the valves may be involved. Pericarditis is occasionally noted.

Microscopically, the lymph nodes typically show numerous macrophages, fat filled spaces, and an occasional epithelioid granuloma. The small intestine shows swelling of the lamina propria and blunting of the villi. The lamina propria is filled with macrophages or foam cells and may have fat filled spaces and rarely a granuloma.

Black-Schaffer demonstrated that most of the macrophages and giant cells stained strongly with periodic acid-Schiff (PAS) fuchsin reagent and not with Sudan IV which stains fat.[333] He also found that if Sudan IV and PAS were both used, lipid and PAS staining material were found side by side. Next, Sierachi noted that the PAS positive material was found throughout the body wherever RE cells are found. He also noted that the PAS material was granular, and called the granules sickle form particles, and the macrophages sickle form particle containing cells or SPC cells. Sickle particles have not been found in any other disease.

Considerable attention has since been centered on the histochemistry of the PAS material. It stains negatively with oil red O which stains saturated fats. It does not stain with carmine and is diastase resistant and thus it is not glycogen. It stains with aldehyde-fuchsin which stains carbohydrates and proteins and takes up osmic tetroxide which stains sulfhydryl groups and double bonds.[34] Enzyme stains including Glucose 6 phosphate dehydrogenase, DPN and TPN diaphorase, alkaline phosphatase and acid phosphatase show no difference between normal macrophages and those found in Whipple's disease. From this it is concluded that the PAS substance is probably a glycoprotein, although it could be an unsaturated fat. Kurtz showed that the PAS positive granules stain with scidine orange, which stains the walls of bacteria and fungi. Yardley showed that the PAS positive material was gram positive.

Using the electron microscope Haubrich noted that the sickle formed particles contained cylindroid bodies with a clear center. Since carbohydrates and RNA are not osmophilic and protein is, he postulated that the center contained RNA and CBH which formed the protein which is then extruded. Others saw the same structures and called them bacteria or viruses, or just inclusion bodies.[35]

Fisher[15] noted the similarity between sickle particles and mitochondria and also between the cylindroid bodies and the cristae metachondriales of the metachondria.

DIAGNOSIS

Prior to 1945 the diagnosis was made only at autopsy. In 1947 Piute first made the diagnosis antemortem on a mesenteric lymph node biopsy. In 1955 the diagnosis was made on a peripheral node biopsy. Since then such biopsies have been found to be positive in 50 per cent of cases. A major break-through occurred in 1956 when Shiner devised a tube for obtaining a small intestinal biopsy.[36, 37] Several modifications have been made of the original, and at the present time multiple biopsies can be obtained from anywhere in the small intestine.[38–40] The Quintin-Rubin tube is the most widely used currently.

In July, Fleming reported a rectal biopsy of a patient with Whipple's disease showing granular PAS material in the lamina propria. He confirmed the diagnosis by jejunal biopsy. In several autopsies of patients with Whipple's disease he found the same granular PAS material in the colon. In rectal biopsies performed on patients with a variety of other diseases this material was not found. Therefore, the diagnosis should be suspected in anyone with a history of arthritis and vague abdominal symptoms, especially if pigmentation and diarrhea are present. Laboratory support is gained by finding steatorrhea and a microcytic hypochromic anemia. Rectal and jejunal biopsies will confirm the diagnosis if granular PAS material can be demonstrated in the macrophages.

Whipple's disease differs from tropical and non-tropical sprue in that glossitis and azotorrhea are uncommon, by the microcytic anemia, the presence of pigmentation and by the unresponsiveness to folic acid or a climate change. It differs from pancreatic insufficiency in that the duodenal aspiration is normal after secretin and in the absence of the characteristic pain. It can be differentiated from Addison's disease by the normal 17-OH and ketosteroids.

Regional enteritis differs in that arthritis when present follows diarrhea, and that perforation, obstruction and fistula are common and regional enteritis lacks systemic manifestations. Symptomatic sprue refers to steatorrhea due to obstruction of lymphatics. It may be due to chylous cyst, lymphoma, parasite, trauma or tumor. Whipple's disease has been placed in this category and the diagnosis can often be made only by laparotomy or intestinal biopsy.

Until the advent of steroids and antibiotics, no case with remission had been reported. In 1952 Jones reported a remission with ACTH and cortisone.[41] Since then several have been noted with the time of remission varying from six months to eight years.[42-44] However, Gross reported four patients who did not respond to steroids and subsequently several of those reported with remissions died despite the use of large doses of steroids. Then Shaffner[45] reported a patient who had a remission with tetracycline and steroids.[45] In 1960 England reported an interesting case that responded to steroids and antibiotics. The patient had been maintained on tetracycline for three years, taking 12.5 mg. TID. If stopped, diarrhea recurred. Most of the recent remissions have been in patients treated with steroids and antibiotics.

Ruffin states that antibiotics are most important.[46] Chears reported seven patients treated with antibiotics and/or steroids. The only one that died received steroids only. At the present time antibiotics and steroids are used initially, and then the patient is maintained on antibiotics. However, it should be noted that spontaneous remissions occur[47] and that two remissions have been reported with nitrogen mustard.[47-49]

PATHOGENESIS

Since the etiology and pathogenesis of Whipple's disease have not been established, a number of theories have been advanced. Many earlier authors were impressed by the similarity of the clinical features of Whipple's disease and Addison's disease. Plummer[47] suggested that impaired adrenal corticoid response caused abnormal fat absorption, which led to the deposition of fat in the mesenteric lymphatics with resultant obstruction. In adrenalectomized rats, Baretta found increased fat excretion. This became normal if the rats were given 10 mg. of cortisone a day. Then, Bergner observed a decrease of fecal fat excretion in three patients with Addison's disease with steroid treatment.[50] Barnes, however, found the fecal fat in adrenalectomized rats could also be decreased by feeding sodium chloride and no steroids.[51] Also, Ingle could find no effect of the adrenal on fat absorption.[52] Hollenberg[14] thinks that the slightly low steroid values in some patients are secondary to the chronic illness. Also, steatorrhea is rare in Addison's disease.

A bacteriol etiology is currently popular. This is due to the electron microscopic findings, as well as the response to antibiotics. Chears suggests that the phagocytosis of bacteria results in a bacterial destruction product which is the abnormal glycoprotein, or that the glycoprotein is formed by the host in response to the infection. Hendrix thinks the bacteria cause the intestinal defect and secondary absorption of a glycoprotein causes RE stimulation. Others believe that the electron dense particles are viruses. Some think Whipple's disease is a primary reticuloendothelial disorder, and that the RE cells produce the glycoprotein.[53] The newest concept is that there is an abnormality of the mitochondria of the RE cells in the lamina propria. This is based on the similarity to the sickle form particles.

Lastly, a genetic etiology has been mentioned because of the predilection for males and the white race and the occasional appearance of two cases in the same family.

In summary, Whipple's disease is an uncommon systemic disease characterized by arthritis and diarrhea. There are collections of PAS positive electron-dense particles in structures resembling the mitochondria of macrophages. The etiology still has not been elucidated. A bacterial causation is currently in vogue. However, as yet, no bacteria have been cultured from tissue or blood.

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The Carpal Tunnel View

A new technic for obtaining a view of the volar surfaces of the carpal bones and carpal tunnel is described.

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The volar aspect of the wrist is difficult to examine roentgenologically because of many overlying osseous structures. The carpal tunnel view projects the volarly placed carpal bones in profile. The soft tissue elements of the carpal tunnel can also be studied. Hart and Gaynor[1] first described a technic for demonstrating the carpal tunnel. A new technic that increases ease of positioning and reproducibility of results is presented.

Technic

The examination is best performed with the patient seated and leaning slightly forward. The palm of the hand is placed on the cassett, and the wrist is hyperextended to 90 degrees. If 90 degrees of hyperextension cannot be achieved, sponge rubber is placed under the hand so that the forearm is perpendicular to the cassett (fig. 1A).

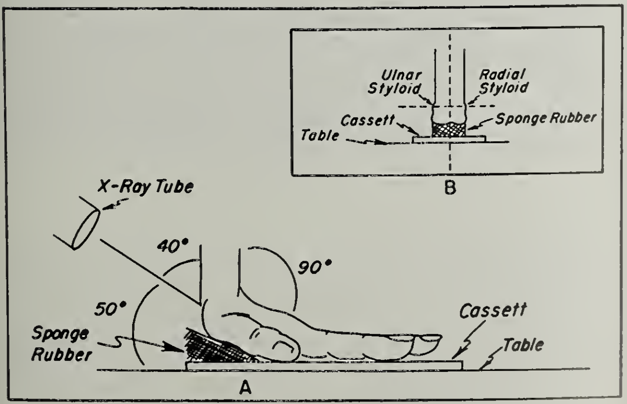

Fig. 1. The drawings demonstrate the position of the hand and forearm and the alignment of the x-ray tube. If necessary, a small piece of sponge rubber is placed under the hand so that the arm is perpendicular to the cassett.

The x-ray tube is positioned posteriorly at a 50 degree angle to the horizontal plane. There is no lateral angulation. The horizontal wire of the collimator is centered on the radial and ulnar styloid processes (fig. 1B).

Discussion

The carpal tunnel is produced by the transverse carpal ligament. It stretches across and is attached to the pisiform and hamulus of the hamate medially, and the tubercle of the navicular and ridge of the multangular laterally. The floor of the resulting tunnel is formed by the lunate. Figure 2 is a roentgenogram showing the anatomy of the normal carpal tunnel.

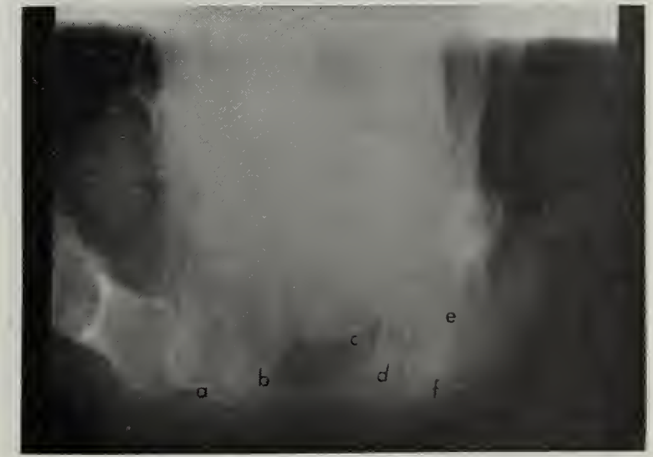

Fig. 2. The x-ray illustrates the anatomy of the normal carpal tunnel: a) greater multangular, b) navicular, c) lunate, d) hamulus of hamate, e) triangular, f) pisiform. The average technical factors are 100 ma., 1/30 sec., and 70 KV.

The anatomy of this area has been reviewed by Robbins.[2] Nine flexor tendons and the median nerve pass through the tunnel. The median nerve is slightly flattened as it passes just beneath the transverse carpal ligament.

The carpal tunnel view is essential in demonstrating fractures and dislocations of the pisiform (fig. 3), hamulus of the hamate, ridge of the greater multangular and tubercle of the navicular. Calcific tendonitis occurs in this region.[4]

Increased compression of the median nerve as it passes through the carpal tunnel may result in the carpal tunnel syndrome.[3] This syndrome is

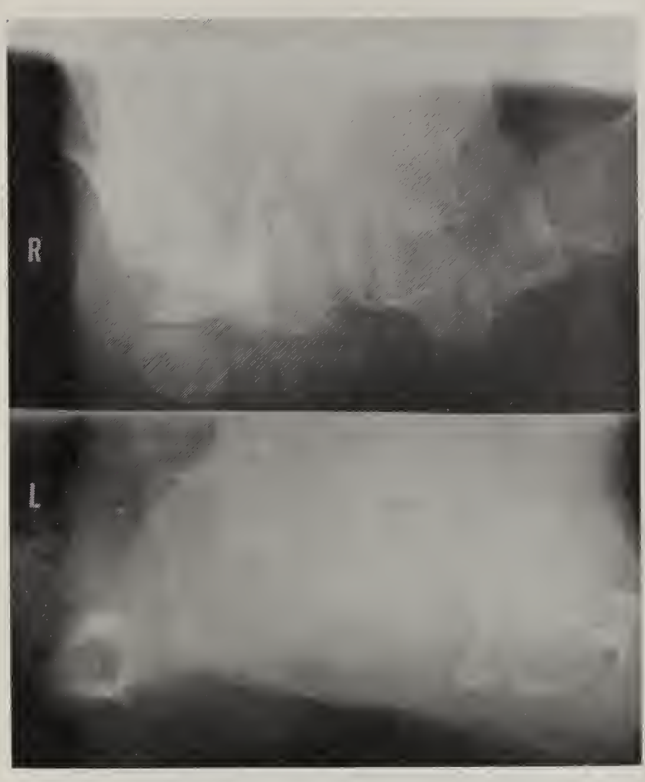

Fig. 3. There is a dislocation of the left pisiform.

characterized by burning pain, numbness and tingling in the hand. Any infectious, traumatic, congenital or degenerative process that compromises the size of the carpal tunnel may produce significant compression of the median nerve and produce the syndrome.

Summary

The volar surfaces of the carpal bones and the carpal tunnel are not visualized on routine roentgenograms of the wrist. The carpal tunnel view projects these structures in profile. A new technic for obtaining this view is described and illustrated. The possible fractures, dislocations and disease processes demonstrated by the carpal tunnel view are reviewed.

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JACOB KULOWSKI, M.D., *St. Joseph*

Obstacle to Closed Reduction of Posterior Fracture—Dislocation of the Hip

The need for early reduction in posterior dislocations and fracture dislocations of the hip is stressed. An illustrative case is presented.

Dr. Kulowski practices orthopedic surgery in St. Joseph.

The treatment of uncomplicated posterior dislocations and fracture dislocations of the hip has changed little,[1, 2] but all should be aware of the importance of very early reduction and the danger of avascular necrosis (and traumatic arthritis) from delayed and vigorous manipulation. A dislocated hip is a surgical emergency and must be reduced as swiftly and gently as the medical status of the patient will permit. Open reduction is much to be preferred to rough, repeated manipulation. At the same time all should be aware of certain obstacles to closed reduction.[3, 4]

Figure 1 shows a posterior fracture dislocation of the left hip in a man of 55 years who had been involved in a side swipe vehicular collision while occupying the back seat of his car. Small fragments of bone seen just below the dislocated femoral head apparently had been broken off the posterior margin of the acetabulum. Figure 2 indicates that closed reduction was incomplete and unstable (head low, femoro-acetabular gap wide and Shenton's line broken).

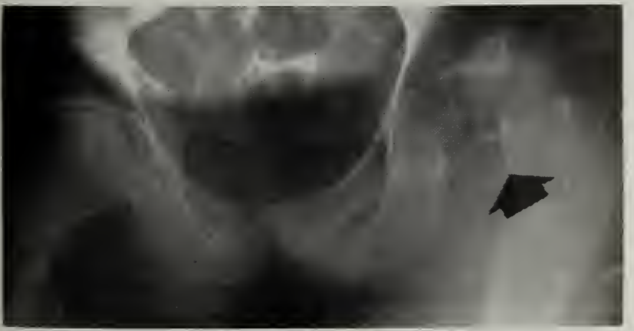
Fig. 1. Posterior fracture dislocation.

At operation (figure 3, left), a surprising amount of soft tissue was found to be interposed between the floor of the acetabulum and the head in addition to the bone fragments already

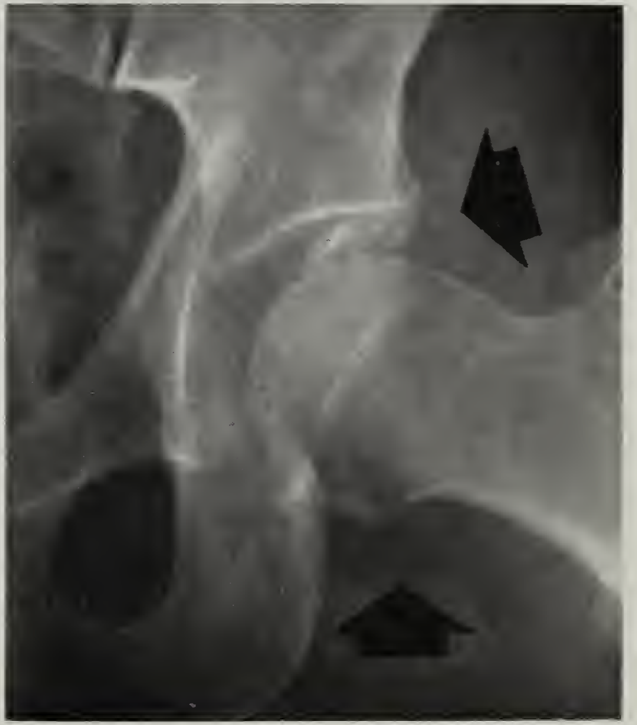
Fig. 2. Closed reduction was incomplete.

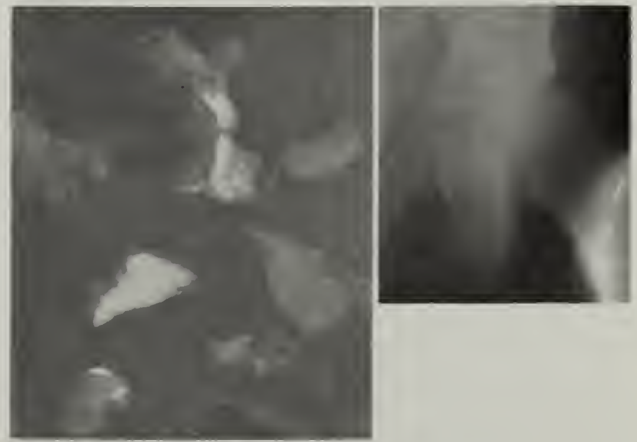
Fig. 3. Appearance at operation.

(Continued on page 448)

RAYMOND E. PROBST, M.D., *and*
THOMAS M. MIER, M.D., *St. Louis*

First Trimester Pregnancy and Carcinoma of the Cervix

CANCER INVOLVING the female genital organs constitutes a major cause of death and therefore is a subject of great concern. The high death rate in women who have pelvic cancer is particularly tragic because it is so often needless. A great majority of these deaths could be avoided if only simple diagnostic technics and procedures were employed.

The signs, symptoms and methods used to diagnose, prevent and treat cervical carcinoma associated with an intrauterine first trimester pregnancy are discussed.

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Carcinoma of the cervix uteri is the commonest of all malignant neoplasms occurring in the female genital tract and presently is only exceeded by cancer of the breast as the most frequent form of malignant disease in women. When this condition occurs in conjunction with an intrauterine pregnancy many perplexing facets of management enter into an already difficult therapeutic problem. For the total care of these cases the skill of the general practitioner, surgeon, gynecologist and radiotherapist is needed.

This is a form of cancer which produces a train of symptoms, arises in an area which is accessible to both sight and palpation and despite this advantage the overall five-year survival figures only approach 50 per cent. This is an appalling fact and leaves much to be desired, for there is little doubt but that this disease could almost be eradicated if the condition were detected in its early stages. This concept holds true for the pregnant as well as the non-pregnant woman. During the last 13 years there have been three cases of cervical cancer associated with pregnancy seen at the St. Louis University Hospital. The infrequency of invasive carcinoma of the cervix uteri during pregnancy and the poor results attained in its treatment justify the periodic reporting of clinical experience pertaining to this matter. It is our purpose to discuss briefly the management of this disease when it is encountered in the first trimester of pregnancy.

DISCUSSION

It is sometimes difficult to establish accurately the true incidence of cervical carcinoma occurring during pregnancy. The incidence will be higher or lower depending on whether these cases are referred to an institution for therapy or enter of their own volition. Obviously referral would increase the incidence. At the Ellis Fischel State Cancer Hospital in Columbia, Mo. a total of 1,690 cases of carcinoma of the cervix were compiled and the incidence of associated pregnancy was 2.2 per cent,[1] while the incidence of carcinoma of the cervix occurring in an unselected series of obstetrical patients is approximately one to 4,000.[3] Within the last 13 years there have been three cases of cervical carcinoma during pregnancy on our service while the total number of deliveries has been 18,921.

The fifth decade is the most common period for this condition to occur, but a small percentage does occur in women in their twenties and thirties, and a few cases have been seen in girls under 20. The multipara most frequently is afflicted with the disease. Bleeding, discharge and pain are the three principal symptoms; unfortunately these can, all too frequently, be ascribed to being caused by the pregnancy.

The ideal time to begin prenatal care is in the first trimester. This is usually the case in the private patient but many times is the exception on the clinic service. It has been estimated that the patient's chances for successful treatment decrease about 15 per cent for each month that treatment is delayed after the onset of vaginal bleeding.[2] Therefore education of the public in regard to prenatal care along with a higher socioeconomic standard could reduce this delay period somewhat. Delay once prenatal care has begun, can be attributed to the physician, who without benefit of an examination to eliminate the possibility of a malignancy might feel the vaginal bleeding is being caused by a cervical erosion, cervicitis, persistent menstruation or some other obstetrical complication. It might be pointed out that 10 to 15 per cent of patients are symptom-free yet have advanced carcinoma.[4]

The initial prenatal visit should include a complete history and physical, including a pelvic examination, which presumes visualization of the cervix. This should include the taking of a Papanicolaou smear of the cervix in all women more than 25 years of age.

If a Class I or II smear is reported, it need only be repeated at the routine time, namely a six month to yearly interval. If a Class II smear is obtained then any local infection should be treated and the smear repeated in one to two weeks. If the smear reverts to normal then the patient should be followed at three to six month intervals until the pregnancy is completed.

If a Class III reading is re-obtained or if an initial Class IV smear is found then, without any gross lesion being visible, a cold knife conization as a hospital in-patient should be carried out. If a possible gross lesion is present the use of Schiller's solution is sometimes useful in selecting the area from which a biopsy could be taken. Cold knife conization of the pregnant cervix is neither simple nor a procedure without few complications. Hemostasis and avoidance of terminating the pregnancy by faulty handling of the internal cervical os are the immediate concern; with the producing of an incompetent cervical os as a later complication to keep in mind. At the same time an estimation of the amount of cancer and direction of its spread should be ascertained because it has a direct bearing on the choice of therapy and the prognosis of the patient. If an in situ lesion is obtained by cone biopsy, no further therapy is needed until after delivery, which may be vaginal. Age, parity and desire for future pregnancy will dictate subsequent definitive therapy.

When a diagnosis of invasive carcinoma is made during the first trimester definitive therapy should be instituted immediately. Pretherapy should include a chest x-ray, intravenous pyelogram, cystoscopy and proctoscopy. If the lesion is confined to the cervix and is less than one centimeter in diameter and if the patient is relatively thin and free from any serious medical difficulty we feel the treatment of choice is a radical abdominal hysterectomy with a pelvic lymphadenectomy. Even though the uterus is enlarged and soft and pelvic viscera vascular, the dissection of the lymph nodes can be carried out without undue difficulty. If the patient is obese or a poor surgical risk from a medical standpoint, radiation is recommended as the primary treatment. This is begun in the form of external radiation which unfortunately causes death of the fetus and produces a spontaneous abortion. It has been shown that induced abortion or hysterotomy prior to radiation yields an 11 per cent five year survival as contrasted with a 57 per cent five year survival when radiation was used first.[5] This should then be followed by a radium implant with each case being individualized as to dosage. In stages II, III and IV we feel this method of radiation therapy is the treatment of choice. Stage IV lesions have been treated by pelvic exenteration but we feel this procedure should be reserved for those patients who can potentially be cured and should be done by a trained team of surgeons.

CASE REPORTS

Case 1. A 25 year old white female, gravida 3, para 3, STS negative, rh positive whose last menstrual period was June 25, 1962 entered the hospital on Aug. 21, 1962 because of a lesion of the cervix which was found to be an invasive epidermoid carcinoma. Her private physician referred her to the clinic service for definitive therapy. Seven years previously she was told that she had a cervical ulceration, and this was treated locally. Four years ago she had had a similar condition and again it was treated locally. She has had a heavy vaginal discharge for the last seven years. Two months ago the patient noticed a continuous bloody discharge. Her menarch was at the age of 11, with her periods occurring every 30 days, lasting four to five days. The ages of her children are 6, 5 and 3, and were all normal vaginal deliveries. She entered her obstetrician's office for routine prenatal care. Past medical history was completely normal. Physical findings showed a thin, well nourished female in excellent general health. Pelvic examination showed the introitus to be parous; there was a purulent discharge in the vagina; a one centimeter excavating ulceration of the cervix was present on the anterior lip, which bled easily to touch; the uterus was the size of an eight week intrauterine gestation. The laboratory findings were as follows: hematocrit 42 per cent, hemoglobin 14 grams, normal white blood count and differential, normal urinalysis, BUN 8 mg. per cent, and a positive frog test. Intravenous pyelogram, cystoscopy and proctoscopy were all normal. Chest x-ray and blood volume were normal. On Aug. 24, 1962 the patient underwent a radical Wertheim hysterectomy and pelvic lymphadenectomy. Twenty-two lymph nodes were found, all of which were free of malignancy. The patient had an afebrile postoperative course. The only problem encountered was her inability to void freely. This was attributed to the extensive pelvic dissection which caused a partially denervated, atonic bladder. She was sent home on the twelfth postoperative day with a foley catheter in place. This was removed in four weeks, with the patient voiding well thereafter. She presently is free of any malignant recurrence.

It can be seen that successful treatment of cervical carcinoma during pregnancy depends on an early diagnosis. This is exemplified by the following patient who is a 22 year survivor.

Case 2. A 32 year old white female, gravida 4, para 4, STS negative, rh positive whose last menstrual period was Sept. 20, 1941 was seen in the prenatal clinic for obstetrical care. At that time she was found to have a one centimeter raised ulceration of the anterior lip of the cervix and a small endocervical polyp. Biopsy of these lesions showed them to contain an invasive epidermoid carcinoma. The uterus was enlarged and approximately the size of an eight weeks gestation. Past medical history shows that her periods were always quite irregular, she denied any excessive or abnormal discharge or vaginal bleeding. Review of symptoms was negative. On Nov. 21, 1941 the patient was admitted to the hospital and underwent a Wertheim hysterectomy and a pelvic lymphadenectomy. Postoperatively she developed a cystitis which responded to sulfathiazole. The remainder of her postoperative course was uneventful. When last seen in June 1963 she was well, without evidence of recurrence and had no genitourinary symptoms.

Comment

The increasing importance of cervical carcinoma associated with pregnancy is due to the improved methods used in its early diagnosis. The inescapable fact that symptoms from this disease usually occur only when it is in an advancing stage dictate the importance of a thorough examination of the pregnant patient in the first trimester. It has been stated that this disease in pregnancy responds less well to the usual types of therapy. This has been attributed to the cancerogenic stimulus of pregnancy. No conclusive evidence has been presented to confirm this hypothesis.

Cancer detection is the duty of all physicians. A pelvic examination and usually a Papanicolaou smear should be done on each patient on her first prenatal visit. If suspicious cells or a lesion is found, appropriate therapy is indicated. When these diagnostic procedures are done properly they do not endanger the pregnancy. Bleeding in the first or second trimester is a signal for repeat examination, including a speculum examination, not the all-too-prevalent policy of "hands off." After a diagnosis has been made, and if no facility is available for the extensive therapy outlined, then the patient should be guided to an area where consultation with an obstetrician, surgeon and radiotherapist can be obtained.

When this basic outline is followed the survival rate in cervical cancer, with or without pregnancy, will vastly improve.

Summary

1. An outline of the principles used to detect cervical carcinoma in pregnancy is given.
2. In selected cases radical surgery is the treatment of choice if the patient qualifies medically and the disease has not spread beyond the cervix.
3. Medical science has given us invaluable tools and technics which should be utilized if the present survival rate of this disease is to be improved.

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CLOSED REDUCTION

(Continued from page 445)

anticipated. Also, both acetabular and head cartilages were badly bruised. The reduction was now stable (same figure, right). The clinical result was good after six months. Undoubtedly traumatic arthritis will occur later on but certainly not to the extent if interposed bone and soft parts had not been removed. The possibility of avascular necrosis is speculative.

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GEORGE C. WEE, M.D., *and* **EDWARD H. LYMAN, M.D.,** *St. Louis*

Food Asphyxiation Simulating Coronary Disease

THE SO-CALLED "café coronary," sudden death occurring in a café or institutional dining room or in the home, is not rare. Generally the stricken individual is in the past middle age group, sometimes is known to have had a previous heart attack or a stroke and usually is edentulous, with dentures which he does not like or does not wear, or which do not fit properly for the purpose of mastication of food. Sometimes the dentures are found in the pocket of the individual after death. These deaths were usually attributed to natural causes and probably to coronary artery disease. Some are due to asphyxiation as a result of occlusion of the airway by food. Haugen[3] recently reported nine such cases. The food which obstructed the airway consisted of steak in four cases, beef in two, ham fat in one, kippered herring in one and broiled lobster in another. It is true there is nothing new about this cause of death,[1, 2] but the mechanism is not appreciated by the average physician, who is sometimes present when this accident happens. It does well for the physician to keep this fact in mind.

Case Report

L. L., aged 73 was hospitalized largely for the purpose of rehabilitation of a right hemiplegia. He was edentulous and had upper and lower dentures. The patient had been in the hospital for several months during which time he had undergone surgery for hernia successfully, although he had extensive arteriosclerosis, arterio-nephrosclerosis, hypertensive cardiovascular disease, class II and cerebral thrombosis with right hemiplegia. For weeks the patient had been up and about in a wheelchair and going to physiotherapy every day. On the day of his death, he was seen suddenly to choke at the dining table and then to fall back. When seen by the physician on duty, a short time after the episode, he was cyanotic and apneic. He was immediately placed flat on his back. While this was being done, he appeared to clutch his chest and gasp. With that, respiration ceased completely. The same was true of the heart tones. About the time of the gasp, the patient's mouth was opened and inspected by the physician but nothing was found. External cardiac massage was instituted but with no success. It was the physician's opinion, knowing the patient's background of hypertensive cardiovascular disease and stroke, that he had had a fatal heart attack.

A case of sudden death in an institutional dining room which simulated coronary disease is presented.

Dr. Wee is Chief of Surgical Service, Veterans Administration Hospital, Jefferson Barracks, and Dr. Lyman is on the staff of the Veterans Administration Hospital and Washington University School of Medicine.

The immediate cause of death as given on the autopsy protocol was asphyxiation, secondary to the lodging of foreign body (white turkey meat) (fig. 1), in the larynx. Other pathologic findings were as follows: (1) arteriosclerosis, general; coronary, severe; left ventricular hypertrophy; acute myocardial insufficiency with pulmonary edema; (2) cerebral arteriosclerosis, severe; old areas of infarction of left lobe; (3) severe nephrosclerosis; (4) aorta, severe arteriosclerosis.

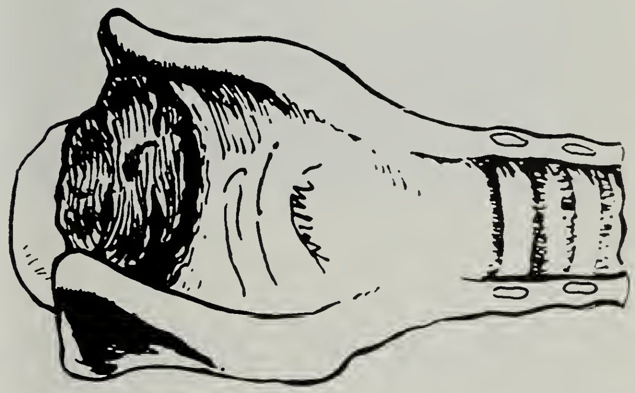

Fig. 1. Artist's sketch showing the chunk of white turkey meat lodged in the larynx.

Comment

The problem confronting the physician, if he is present or near when the attack occurs, or arrives in answer to a call before death ensues, is to decide whether the victim is having a heart attack or is asphyxiated from occlusion of the airway by food. The cyanosis, embarrassed respiration, distended neck veins and sometimes clutching or gasping motions in the direction of the chest could be the same in both cases. Lack of oxygen produces rigidity and it is not always possible to inspect the mouth visually and manually. If an inspection is made, it is possible for an aspirated bolus of food to be obstructing and be so deeply lodged in the trachea or larynx that it is not visible or palpable. If palpable, an attempt should be made to remove it with the finger or an instrument. A quick look at the dinner being consumed at the time of the attack takes only a second and is worthwhile. If solid food or meat is seen partly consumed on the plate, the possibility of a food bolus asphyxia is to be considered. A quick, hard blow between the shoulder blades, with the patient in prone position is worth trying. Occasionally this is all the treatment necessary. If this is not successful, an airway must be established immediately, and the best method is the Jackson two-stroke emergency procedure. Place the thumb and third finger of the left hand on each side of the larynx, and find the spot to enter the trachea with the index finger. Taking the knife in the right hand, make one stroke right down the middle through the skin and a second stroke through the trachea. After the opening is made and the airway established, the profuse bleeding will usually subside. If there is no tracheostomy tube handy, a drinking straw can be used temporarily.

Another means of getting air to the patient is by turning the knife in the wound through the crico-thyroid membrane and holding the wound open. This will create a satisfactory temporary airway. Another emergency method of getting air to the lungs is by using a No. 18 gauge (or larger) hypodermic needle, pushing it through midline of the crico-thyroid membrane. This does not give too much air to the patient, but he gets some by this route. If a patient is fortunate enough to have expelled a food bolus by coughing with the help of a blow on the back, or by manual extraction from above, he must still be watched closely for 24 hours for symptoms of obstruction from laryngeal edema from trauma. If respiratory embarrassment occurs, tracheostomy must be done till the edema subsides.

CONCLUSIONS

Accidental deaths from asphyxiation due to food obstruction of the airway, in restaurants or dining rooms, which are attributed to coronary disease, is not infrequent. Alcohol consumption, and poor or no mastication due to poor teeth or dentures are contributing factors. The only life saving measures of hitting the patient hard on the back or manual removal of the bolus with the finger may be quickly tried before tracheostomy.

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Research in the Service of Medicine

H. M. HARDWICKE, M.D., ***and***
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Role of the Practitioner of Medicine in Missouri

Mental Health Programming

Recent surveys conducted by the Division of Health indicate that from 40 to 60 per cent of the daily patient load of the private practitioner of medicine consists of persons with presenting complaints related to emotional problems. For the most part, these patients are being handled in a satisfactory manner by practitioners in Missouri.

The problem of the anxious or neurotic patient is one which has been accepted by the practitioner of medicine in this state. He may be bothered by it. He may feel inadequate in relation to it and he may hope for some surcease from it. The fact does remain, however, that the general practitioner is dealing with these patients. They are, however, time-consuming and it appears that the load is growing heavier. A number of physicians feel that they need assistance with this segment of their practice.

Missouri is in a unique position in relation to this entire problem. In the last session of the legislature, three intensive treatment centers were authorized for the state. One treatment center will be situated in St. Louis, one in Columbia and one at Kansas City.

The purpose of the establishment of the intensive treatment centers is to make available to patients intensive, highly personalized therapy of the type which is not currently possible in the state hospitals. The ratio of psychiatrically trained nurses and psychiatrists as well as social workers and psychologists, will be of such an order that patients will receive optimum therapy in a relatively short span of hospitalization. In this way each patient admitted to the intensive treatment center will be given an opportunity to profit as fully as possible from the latest knowledge in the field of psychiatry. When the patient has received maximum benefit at the intensive treatment center, he will be returned to his own community and to the care of his referring physician. Hopefully, ancillary personnel at the community level will be available to the referring physician to assist in maintaining the patient's newly recovered health. Ancillary personnel may range in type and training from psychologists through registered nurses to helpful understanding neighbors.

This appears to be an ideal program, but it can only function ideally if the practicing physicians work closely with the staff of the intensive treatment centers toward the solution of common problems that arise in relation to admission, discharge and disposition of the patient.

All physicians are bound to their practices by the long hours and time-consuming demands imposed upon them by their patients. It would be most natural for them to hope that some agency or program could assume responsibility for the garrulous, time-consuming, chronically dependent, usually near indigent patients whose demands always appear to be out of proportion to their recovery potential.

The relationship of the private practitioner of medicine and the Division of Mental Diseases and the planned intensive treatment centers is discussed.

Dr. Hardwicke is Acting Director of the Missouri Division of Health; Dr. Ulett is Director of the Division of Mental Diseases.

Physicians must remember that the practice of medicine involves a one to one relationship of physician to patient. Such a relationship is made possible and maintained by the patient because of his faith in the physician of his choice and his need for the physician's empathy and understanding, his scientific knowledge and his dedication to the ethics of his profession. It is upon this foundation that modern medicine as we know it has been built.

Patients will relinquish this security building relationship only as they are forced to do so by the physicians who reject them. Only after they have been so rejected or directed, will they accept a non-medical source of care.

It is self-evident, therefore, that any program which is to be developed for the care of the mentally ill must not only be medically oriented, it must be "physician of the patient's choice" oriented. This goal can be achieved, but it will require full participation and an assumption of full responsibility for these patients by the practicing physicians of this state.

Some individuals, impatient with the problems and delays in the development of adequate mental health programming which are occasioned by shortages of psychiatrically trained physicians, have advocated that the solutions to this problem be developed outside of the field of medicine.

The thesis that the psychiatrically sick, or the mentally ill, should be treated under the direct supervision of a psychiatrist is accepted by the general practitioner. Only when and if the thesis is enlarged to include all emotionally disturbed patients is there need for the general practitioner to be gravely concerned. There is no more justification for referring all persons with any degree of emotional disturbance to a psychiatrist than there is for the referral of the uncomplicated obstetrical, orthopedic or surgical case to the appropriate specialist. The general practitioner has clearly demonstrated his ability to treat, in a highly successful fashion, the majority of the patients who come to him for care. He should continue to do so.

There are those who uphold the philosophy of separating the therapy of the mentally ill from the therapy of the physically ill. This is not only impractical, but in some instances, it is dangerous. If 40 to 60 per cent of the general practitioner's patient load has a psychoneurotic or an emotional problem, and is transferred to nonmedical personnel for treatment, the coordinating control of the family physician would be lost to his patients. Such a loss could be of irreparable damage to the patient.

When the Constitution of the State of Missouri was revised and adopted in 1948, the operation of the mental hospitals was placed under a new division of government known as the Division of Mental Diseases, whose sole responsibility was to effectuate the laws concerning admission and discharge of mentally ill patients and to operate the mental hospitals owned by the State. It seems clear that the framers of the revised Constitution intended that the state-operated facilities for the care of the psychiatrically ill bear the same relationships to the private practice of medicine that the practice of the specialties of medicine now hold in relation to the general practitioner. Patients are referred by the general practitioner to the specialist because of the need for highly developed diagnostic or therapeutic knowledge possessed by the specialist and required for the particular problem. Following whatever special action is required, the patient is returned to the referring physician. This must be true of psychiatry also. Only if the referred patient is in need of continued hospitalization or custodial care should the relationship with the referring physician be broken.

Physicians need to be particularly aware of the relationship of the soon-to-be-built intensive treatment centers with their own practice. These centers should relate to their patients in the same manner that other medical specialties in consultation do.

Missouri is extremely fortunate in that the Division of Mental Diseases, which is responsible not only for the operation of the state hospitals, but will be also for the operation of the intensive treatment centers, is so oriented to the practice of medicine. It is also fortunate that the Director of the Division of Mental Diseases and the Director of the Division of Health see eye to eye on the fact that mental patients are ill patients and must remain under the care of licensed physicians. It is impossible, however, for agencies of government to achieve this goal without the active help of practicing physicians in this state.

A mechanism has been set up whereby practicing physicians in this state may maintain a voice in policy formation and an active part in any therapeutic regime which is established within the state for those who suffer from mental illness.

The federal government allocated to Missouri $152,000 with which to plan a comprehensive mental health program. A plan created by the Division of Mental Diseases and the Division of Health was approved by the federal government. This plan calls for the establishment of an executive committee, without whose approval no therapeutic regime can be effectuated or program initiated in the field of mental health. This executive committee is composed of the Chairman of the Mental Health Committee of the Missouri State Medical Association, the Director of the Division of Health, the Director of the Division of Mental Diseases, the Director of the Division of Welfare, the Director of the Department of Public Health and Welfare, the Commissioner of Education, the President of the Missouri Health Council and the Dean of the School of Medicine, University of Missouri. The committee, therefore, represents broad-based interests in mental health from an educational, from a therapeutic and from an organizational point of view. It has the authority to establish subcommittees in specialty areas. Each of these subcommittees should contain general practitioners. A special subcommittee should be concerned in establishing the kind of admission, discharge and follow-up procedures helpful to the patient and understandable by him.

A large sum of money has recently been appropriated by Congress in the field of mental retardation. Part of this money is to be used for planning, part for the building of facilities and part for the training of personnel who will work within the facilities. The implementation of the law and the use of the money as it pertains to planning for Missouri has been placed within the Division of Mental Diseases with the organization such that it becomes a subcommittee of the executive committee for overall planning in the mental health area. There is no problem more intimately related to the general practice of medicine than that of the retarded child. This problem cannot be handled with the child alone, but must involve his parents, his relatives and the entire community. This, therefore, is a major medical problem. Representatives of the medical profession will be on the subcommittee for mental retardation.

The mechanism has been established. The responsibility now rests with the practicing physicians in Missouri to take advantage of this opportunity so that they may design their own future as it relates to mental health and mental retardation in a way most beneficial to the patients involved. The implications of this choice and of this responsibility should be fully understood by all physicians.

During the 1950's the federal government first appropriated money for mental health purposes. One of the federal requirements which had to be met prior to a state's utilizing the mental health funds was that there be a mental health authority established. By executive order, the mental health authority was placed in the Division of Health. This was because of an attorney general's opinion that only the Division of Health was empowered to promote and protect the health of the citizens at the community level.

It is important to remember that at this time preventive mental health or preventive psychiatry was being practiced separate and apart from psychiatric therapy. It was logical, therefore, for preventive psychiatry to be placed in public health whose primary orientation is in the field of prevention. It was equally logical that therapy and any monies for therapy be left within the Division of Mental Diseases. Today the prevention of mental illness has become more closely intermingled with the therapeutic approach to mental illness. In fact, there are many who feel there is probably no such thing as a technic for the primary prevention of mental illness. Rather, emphasis should be put on early detection of mental illness and adequate therapy applied. For this reason it seems most appropriate that the mental health authority originally vested in the Division of Health be transferred to the Division of Mental Diseases.

The need for physicians' active, constructive support, understanding and participation in policy formation and program development in relation to mental illnesss becomes increasingly evident as one understands that prior orientation of the state psychiatric system was away from general practice and toward hospitalization. Discharged patients were followed up infrequently and often then only by hospital employees rather than being returned to the referring physician. Possibly the referring physician wanted it that way. He had perhaps accepted the idea that mental illness was something only a psychiatrist could treat.

Actually, the practicing physician can no more divorce himself from the emotional problems of his patients than he can from their physical ills. This is perhaps a troubling thought since few physicians feel that they had an exposure to psychiatry comparable to the other branches of medicine while they were in school. They feel inadequate in the face of a recognized mental problem.

The soon-to-be-built intensive treatment centers will offer the practitioner a fine new resource for evaluation, for diagnosis and for intensive therapy. But this resource will apply to a relatively small number of his patients. It will apply only to those who are obviously psychiatrically ill and who need specialty care.

The intensive treatment center will stand at the midpoint between the physician and the state hospital. Hopefully, the majority of patients sent to the centers will respond thoroughly enough and quickly enough so that they may be returned quite promptly to the community.

The state hospital will continue to serve as the therapeutic resource for the long term patient.

Private physicians must continue to assume responsibility for the majority of their patients. They probably should develop methods by which their neurotic, anxious and disturbed patients might be effectively treated through the use of ancillary personnel. It must however, be physicians who develop such methods and it must be physicians who maintain the legal and medical responsibility for patient care throughout the total treatment process. Otherwise both physicians and the patients who come to them may suffer an irreparable loss.

There can be damage done to the vital physician-patient relationship and to sound, proven principles of the practice of medicine unless

(Continued on page 457)

EARL L. LOYD, M.D., *Jefferson City*

The Physician and Disability Determination

Special Article

The practices and policies of the disability determination teams which decide whether disabled workers covered by Social Security are eligible to receive Old Age and Survivor Insurance benefits are described.

Dr. Loyd is Chief Medical Consultant for the Section of Vocational Rehabilitation, State Department of Education.

Almost every practicing physician is asked by patients from time to time to furnish medical evidence in support of claims for disability benefits under the Social Security Act. About 14,000 workers are expected to file such claims in Missouri during the next 12 months and, judging from past experience, about two thirds will be found disabled. They will join the more than 19,000 disabled men and women in the state currently drawing benefits at a rate of $27 million annually.

Unfortunately, nearly half of the 25,000 medical reports submitted last year by practicing physicians were inadequate, requiring "write backs"—requests for more information—which created added demands on the time of physicians and delayed action on the claims of patients. To avoid "write backs," it is important to understand on what basis a disability determination is made.

After making his claim, the patient generally brings to his physician a Social Security Administration Medical Report form to be used in submitting evidence of disability. This form was designed to be as brief as possible, its content limited to the minimum historical, physical, therapeutic and laboratory data needed to make a determination of disability, yet flexible enough for reporting most impairments. However, the physician need not, and in some cases should not, be limited to the Medical Report form. He may prepare a report of the length he deems adequate. He may also submit photostatic copies of records already on hand.

The chief factor for the physician to bear in mind is that the medical evidence submitted will be used to evaluate the functional capacity of the patient. To qualify for Social Security disability benefits, the applicant must have a physical or mental impairment which prevents him from doing any kind of substantial gainful activity.

This is not a narrow occupational definition. A person who is prevented by an impairment from doing his accustomed or prior work but who has the capacity for other substantial work considering his vocational and educational background, cannot be considered disabled under the law. The injury or illness must be medically determinable; that is, demonstrable through the diagnostic technics of medicine. It must have prevented work for six months and must be expected to be of long continued and indefinite duration despite therapy.

The decision on whether such a disability exists in any given case is made by a two man disability determination team composed of an evaluating physician and an experienced lay evaluator trained in the vocational aspects of disability. In Missouri there are five such teams, located in St. Louis, Kansas City, Springfield, Cape Girardeau and Jefferson City. These professional teams are not employed by the Social Security Administration but instead are employed by the State Board of Education and function as the Disability Determination Unit of the Section of Vocational Rehabilitation, State Department of Education. To assure that disabled persons in all states receive uniform consideration, decisions made by the evaluation teams in Missouri and elsewhere are reviewed by professional personnel, including physicians, in the Baltimore headquarters of the Social Security Administration.

Since the evaluating physician does not examine claimants personally, he must depend solely on reports from practicing physicians and special consultative medical sources (to be discussed later) for the necessary factual data on which to base his decisions. He uses the practicing physician's report as a basis for reaching independent conclusions concerning the impairment and its effect on the applicant's capacity for substantial work. He can form an accurate picture of the impairment only if the reporting physician has given, in addition to his own diagnostic, prognostic and therapeutic conclusions, the clinical and laboratory data which underlie these conclusions.

The Medical Report should contain sufficient history to determine the date of onset and course of the disease, reports of physical findings and results of diagnostic tests and treatment. Since the report will be used to determine functional capacity, it must contain information about how the impairment affects the patient's ability to perform the physical and mental functions needed for work—for example, his ability to walk normally, to stoop or bend; to use public or private transportation; to manipulate common objects; to see and hear; to speak coherently and understandably, and to perform any other activities necessary for work.

In reaching a decision as to whether an impairment is sufficiently severe to prevent employment, the evaluation team more often than not must focus attention primarily on degree of disability. Sometimes the evaluation team is faced with trying to reach a determination on the basis of a report such as this: "This patient ambulates with difficulty, using a cane. His body is noticeably pulled to the left side and his left leg is shorter than his right. X-ray shows degenerative arthritis in both hip joints."

Such data, while certainly informative, are not adequate to permit the evaluation team to assess the extent of physical loss or atrophy of extremities which limits the patient's movements. Since the team's determination is made in the light of the patient's ability to perform substantial work, it needs to know how the patient's muscular skills are affected by the pathologic changes, and how his impairment interferes with sitting, bending and ambulation; or reaching, lifting and grasping.

In contrast, the evaluation team would have little difficulty reaching a decision had the physician's medical report contained more precise data such as, for example: "Patient's left hip joint is ankylosed and right hip joint is limited to 75 per cent of normal flexion. Left hip joint has flexion contracture of 45 degrees, abduction to zero, and adduction is 20 to 25 degrees. There is no internal rotation and external rotation is possible to 60 degrees. At any of the maximum motions, he has marked pain with reference to the knee both medially and laterally. The range of motion of his left knee is good except that there is medial ligament instability and marked pain about the medial collateral ligament and pes anserinus."

To evaluate the functional limitation caused by impairments, the same kind of history, physical findings and laboratory data are needed, for the most part, that the attending physician requires in making his diagnosis and planning his treatment. Certain medical facts, however, have greater physical capacity relevance than diagnostic and therapeutic relevance. For example, the results of a ventilatory study or of a calculated oxygen consuming capacity procedure are more significant to physical capacity evaluation than to diagnosis.

About one out of every three Missourians awarded disability insurance benefits has a primary diagnosis of cardiovascular disease. In describing heart disease in the patient, general terms such as "mild," "moderate" or "severe" are helpful, but unless supporting facts are included the reviewing physician does not have the precise data he needs to measure remaining capacity for work. The medical report should include cardiac size as shown by P.M.I. and x-ray. Serial blood pressure readings in patients with hypertension are often helpful. EKG interpretations should be accompanied by descriptions and actual findings. Comments should be included as to the presence and extent of edema as measured by physical findings, weight change with diuretics and such. The report should also show the level of exertion that results in dyspnea and/or angina and the clinical characteristics of these symptoms.

When dyspnea is present, it is necessary to know the characteristics of this symptom in order to accurately evaluate disability. When was it first noticed? Is it persistent or intermittent? Is it progressive? How does it relate to exercise? Dyspnea should be expressed in terms of the number of steps that can be mounted, or the distance in blocks that the patient can walk, and the speed at which these activities can be performed.

When chest pain is the patient's principal complaint, it is important for the physician to indicate its location, whether it radiates, and how it responds to medication. The severity of angina should be related to specific activity, and circumstances such as eating, walking, emotional stress and the effects of weather conditions.

In reporting an emotional disorder, the attending physician should pinpoint the practical effects of the condition to provide the disability determination team with as total a view of the patient as possible. A report from a psychiatrist describing how the patient's tension or "anxiety state" restricts personal and social activities gives a more detailed picture for disability evaluation purposes than one limited solely to vocational considerations.

An example would be a woman who has taught school for 24 years and gives up teaching because of "anxiety reaction." The psychiatrist observes that she is tense, unable to relax, has memory lapses and difficulty in concentration. During the course of examination, however, she mentions that she continues to serve as superintendent of her Sunday School and actively participates in bridge club. She also continues weekend visits with friends or to tour points of historic interest.

Modern psychiatry has shown that a diagnosis of psychoneurosis does not necessarily equal disability. Although in the case described the patient may not be able to return to her former job as a teacher, it is not unreasonable to expect that she could work effectively at jobs that involve less stress. If the evidence reported does not show the claimant restricted in terms of social and personal activity, a serious doubt is raised as to whether the mental and emotional condition is sufficiently severe to meet the Social Security test of disability.

When depression is a significant clinical feature, the physician should corroborate its presence by furnishing objective evidence of any mental regression, loss of interest in personal appearance and usual activities, impaired capacity for concentration, abnormalities of appetite and sleep cycle, evidence of agitation, preoccupation with suicidal ideas and actual attempts at suicide. Severe depressions which last for several months or longer could be expected to produce one or more of these symptoms.

In cases of conversion hysteria lasting six months or longer which involve the limbs, physiologic changes such as atrophy should be noted to corroborate the severity of the condition. In the diagnosis of organic brain syndrome, specific evidence of intellectual and/or emotional regression should be reported. Specific examples relative to loss of memory for recent events or erroneous responses to questions are helpful in assessing the severity of the condition. Unless validated by specific examples, conclusions such as "impairment of judgment, insight or memory," are not precise enough to provide a guage of severity. Standing alone, terms such as "deep-rooted," "deep-seated" or "paranoid" create similar difficulties.

To the extent possible, all reports should describe the patient's condition from the time he says he first became unable to work. This is important because much of the disability decision depends on time factors. If an application is filed without undue delay, benefits can be retroactive to the first month after the expiration of the six month waiting period; but an applicant may lose his insured status (and thus his entire eligibility for benefits) unless the date he first became disabled can be medically established. The impairment must have prevented work at a time when the individual had insured status.

About two thirds of the claims filed during the coming year will be decided on the basis of information supplied by the applicant's own medical sources. However, there are cases in which additional evidence is needed in order to reach a sound decision. In these cases, the evaluating physician recommends the purchase of independent consultative examination and special tests from private physicians. (The fees for such examinations are in accordance with those established by the Medical Advisory Committee of the Section of Vocational Rehabilitation.) Referral of a patient for a consultative examination in most cases indicates the need for special data which experience has shown are not generally available from the claimant's personal physician. It does not imply that the practicing physician's report goes unused or is inadequate.

The physician's medical report also serves two important functions to the Section of Vocational Rehabilitation; First, the assessment for rehabilitation potential of every person who applies for Social Security disability benefits; second, if the applicant is capable of future employment he is referred to the Section of Vocational Rehabilitation which assists him in developing a vocational plan within the framework of remaining physical and mental capabilities. Thus, the physician plays a key role in disability determination and vocational rehabilitation procedures—whether it is to assist his patient obtain Social Security cash benefits or aid in the development of plans which may lead to a new vocational adjustment.

MENTAL HEALTH

(Continued from page 454)

proper direction is given to these newly planned and accelerated programs in the field of mental health. This threat will become real, however, only if physicians fail to assert the leadership which the people expect of them. The threat will become real only when and if physicians permit the responsibility of treatment of mentally ill patients to pass out of their hands into the hands of those who have no medical training.

The time for decision and for action is now. *Once we as physicians have relinquished our legal obligation and responsibility for the total care of our patients, we can never reclaim it.*

Leonard T. Furlow, M.D.

President's Message

This time of year brings the culmination of college work to many who will receive their degrees and start on their careers. To many, however, this month means planning for further study, and among these are many medical students.

In planning work for the fall, many medical students will be concerned with the financing of their continuing training, for a career in medicine requires much money and many years of preparation.

It was to help these students that the Missouri State Education Foundation was formed. At the annual meeting of the Foundation it was reported that 257 loans had been made to 103 students. The need continues, and it will be greatest during the summer when medical students are making their arrangements for the fall term. The Foundation has filled a great need and will continue to do so as long as your contributions make it possible for it to function.

All contributions are tax deductible. Why not send yours now?

Leonard T. Furlow

EDITORIAL

AMA TO MEET IN SAN FRANCISCO

When the American Medical Association meets in San Francisco June 21 to 25, between 15,000 and 16,000 physicians are expected to be in attendance. At the last convention held in San Francisco in 1958, the total physician registration was 13,997.

Chairman of the Council on Postgraduate Programs, Dr. J. Arnold Bargen, Temple, Tex., outlined the scientific program as most comprehensive including lectures, scientific exhibits, preview showings of medical films and color television.

Among general scientific presentations will be "Differential Diagnosis of the Liver and Pancreas," "Hyperbaric Oxygen Phenomena," "Computers in Medicine," "Autoimmune Mechanisms and Disease," "Cardiovascular Opacification" and "Tumors of the Endocrine Function." Dr. Kenneth K. Keown, Columbia, is serving as the coordinating secretary for the hyperbaric program.

The 21 sections of the Association, representing various specialties in medicine, have planned programs on subjects including toxicants and insecticides, chronic ulcerative colitis, psychiatry in general practice, gynecology for the general practitioner, ecology to closed environments (submarines and space craft), basic courses in hand surgery and common foot problems, differential diagnosis of the liver and pancreas, management of lower extremity amputees in the light of recent research, procedures for the treatment of anorectal diseases and contamination and infection of the bladder and kidney.

The George R. Minot lecture before the Section on Experimental Medicine and Therapeutics will be presented by Dr. George E. Cartwright, Professor of Medicine at the University of Utah College of Medicine, Salt Lake City. He will speak on "This Age of Drugs and Chemicals: Hematologic Implications." The lecture named in honor of Dr. Minot of Boston, whose contributions to knowledge of the causes and control of pernicious anemia have been recognized throughout the world, was established at the AMA Clinical Session in St. Louis in November 1948. At this meeting three officers of the Section, Drs. Dwight L. Wilbur, San Francisco; Edgar van Nuys Allen of Rochester, Minn., and Carl V. Moore, St. Louis, were appointed to explore the idea for establishing such a lecture. Following this another committee was appointed to work out the details and the first Minot lecture was delivered by Dr. William B. Castle, Boston, at the AMA Atlantic City convention in June 1951. The title of that address was "The Contributions of George R. Minot to Experimental Medicine."

Under "Computers in Medicine" a half day program will be devoted to the computer's potential role in detecting, amplifying, measuring, analyzing, correlating, communicating, controlling and forecasting the manifestations of the human organism.

Ramblings of the Field Secretary

The Annual Spring Conference of the Missouri Health Council was held at the Medical Center, University of Missouri Medical School in Columbia on Friday, April 17. Seventy people registered at the conference representing 22 member agencies and six outside groups. The theme of this year's program was, "Health Care—Its Costs."

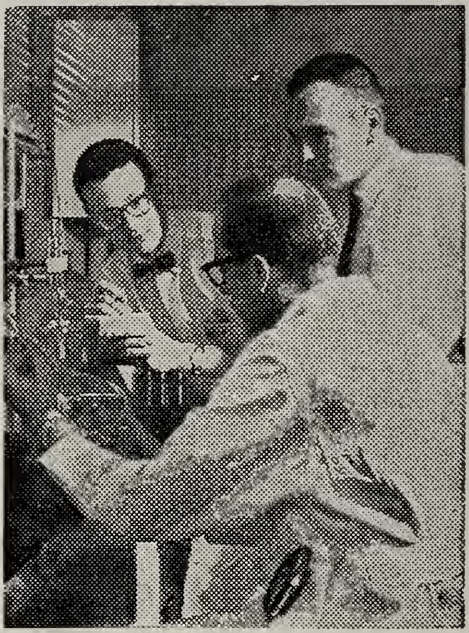
The morning session covered discussions relating to the cost of hospital care in a small hospital, a large teaching hospital, in a metropolitan area and cost of hospital care as related to third party payers.

The afternoon session was concerned with health costs, mental health care and its costs in Missouri, cost of health care through the Vendor Program and health care and its costs as viewed by a practicing physician.

At the close of each session a question and answer period was held with a number of pertinent questions posed by the audience. Mr. Ted R. Lloyd, Jefferson City, Chairman of the Missouri Health Council, presided.

The fall conference of the Health Council will be held in Jefferson City on September 22. The program for this conference will be concerned with "Health in Missouri Schools—Elementary and Secondary." The morning part of the program will picture the present situation in Missouri in regard to the subject and the afternoon will be devoted to the presentation of views and opinions of various interested people such as parents, physicians and students concerning the subject under discussion. All conferences of the Health Council are open to the public and no registration fee is involved.

The objectives of the Missouri Health Council are: "To bring together state-wide organizations, agencies and county health councils, with a fundamental interest in health, for discussion, debate, and interchange of opinions and planning; to serve as a clearing house on health problems and programs; to activate joint planning which will encourage coordination of efforts."



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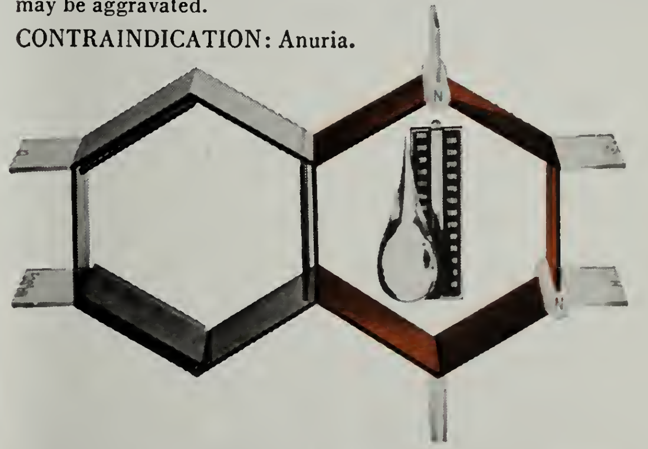

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News—Personal and Professional

At the ninth congress of the Pan-American Association of Oto-Rhino-Laryngology and Broncho-Esophagology in Bogota, Colombia, in February, **John S. Knight**, M.D., Kansas City, presented a paper on "The Use of Plastic Sheeting in the Larynx."

Recently appointed a member of the Council on Foods and Nutrition of the American Medical Association is **Robert E. Shank**, M.D., St. Louis.

Members of the staff of the Veterans Hospital at Poplar Bluff heard **Bernard T. Garfinkel**, M.D., St. Louis, discuss the relationship of viruses to malignancies at a meeting late in March.

The St. Louis Notre Dame Alumni Club's "Man of the Year" Award was presented to **Daniel L. Sexton**, M.D., St. Louis, at an April meeting.

"The Influence of the Medical School and Medical Center on the Practice of Internal Medicine" was the subject of a talk presented by **C. Thorpe Ray**, M.D., Columbia, at a meeting of the American Society of Internal Medicine early in April.

The Lebanon Record, in a series of articles on "Horse and Buggy Doctors," published a picture and a story about Dr. W. R. Summers, father of **J. H. Summers**, M.D., Lebanon, in a recent issue.

Residents of the Gideon area honored Dr. and Mrs. **F. G. Hopkins**, Gideon, in late March for their 25 years of service to the area. A plaque was presented to Dr. Hopkins and roses to Mrs. Hopkins.

Elected president of the newly formed Missouri Ophthalmological Society was **Winfred L. Post**, M.D., Joplin.

Reelected recently as a member of the Council on Occupational Health of the American Medical Association is **Richard A. Sutter**, M.D., St. Louis.

The Association of American Physicians and Surgeons named **Thomas L. Dwyer**, M.D., Mexico, as president-elect at an April meeting.

"The Unusual Experiences in Pediatric Surgery" was the subject of a talk by **J. Eugene Lewis Jr.**, M.D., St. Louis, at the Southwestern Surgical Conference in San Antonio in late April. He also took part in a panel on "Tumors in Infants and Children."

The St. Louis Gynecological Society recently elected **Thomas M. Mier**, M.D., St. Louis, as president. Other officers elected are **Melvin Roblee**, vice president; **Carl J. Dreyer**, secretary; **Robert Burstein**, treasurer; **A. C. Trueblood**, councilor.

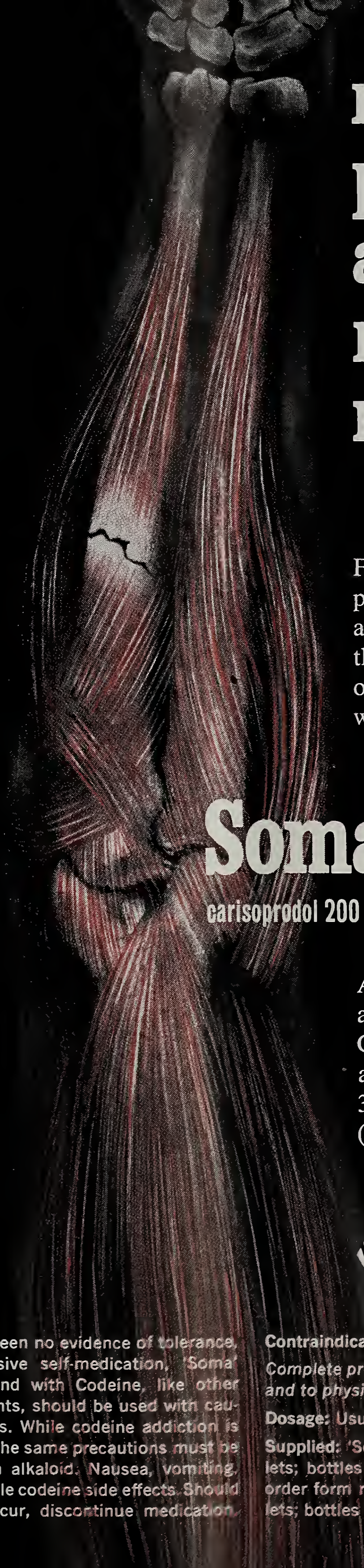
The Missouri State Surgical Society recently elected **Virgil E. Jeans**, M.D., Joplin, as president.

Recently **Sol Sherry**, M.D., St. Louis, was appointed a member of the Council on Drugs of the American Medical Association.

At a Central Surgical Society meeting in late February, **Claude J. Hunt**, M.D., Kansas City, discussed a paper on "Prolapse of the Rectum."

The American School Health Association has appointed **Charles A. Brasher**, M.D., Mount Vernon, a member of the Committee on Tuberculosis.

The Buchanan County Tuberculosis Society at a meeting in St. Joseph on April 13 heard **John H. Mayer Jr.**, M.D., Kansas City, discuss "Respiratory Disease and You." **Charles A. Brasher**, M.D., Mount Vernon discussed the place of the Missouri State Sanatorium in the health pattern of Missouri at the same meeting.



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New Members

M. Roman Banton, M.D., 2917 St. Louis Ave., St Louis, has become a member of St. Louis Medical Society. Dr. Banton is a native of Manila, Philippines, received his preliminary education at the University of Santo Tomas, and his M.D. degree at the University of Santo Tomas in 1955. He specializes in internal medicine.

Eugene Barnette, M.D., 207 N. 5th St., St. Charles, has become a member of Lincoln-St. Charles County Medical Society. Dr. Barnette is a native of Old Hickory, Tenn., received his preliminary education at Vanderbilt University, and his M.D. degree at the University of Tennessee in 1957. He specializes in obstetrics and gynecology.

Udaya N. Dash, M.D., 6500 Chippewa St., St. Louis, has become a member of St. Louis Medical Society. Dr. Dash is a native of Puri, India, received his preliminary education at Rovenshaw College, Cuttack, India, and his M.D. degree at S. C. B. Medical College, Cuttack, India, in 1949. He specializes in orthopedics.

Ernst R. Friedrich, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Friedrich is a native of Berlin, Germany, received his preliminary education at the University of Heidelberg, and his M.D. degree at the University of Berlin in 1954. He specializes in obstetrics and gynecology.

Frank P. Gilmore, M.D., 1625 S. 14th St., St. Louis, has become a member of St. Louis Medical Society. Dr. Gilmore is a native of Chicago, Ill., received his preliminary education at Loyola University, and his M.D. degree at Loyola University in 1929. He specializes in medical administration.

Cosmo L. Haun, M.D., 807 Stadium Road, Columbia, has become a member of Boone County Medical Society. Dr. Haun is a native of Mohawk, Tenn., received his preliminary education at the University of Tennessee, and his M.D. degree at the University of Tennessee in 1959. He specializes in radiology.

Maurice N. Johnson, M.D., 800 N. Lindbergh Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Johnson is a native of Minneapolis, Minn., received his preliminary education at the University of Minnesota, and his M.D. degree at the University of Minnesota in 1947. He specializes in occupational medicine.

Ronald K. McGregor, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. McGregor is a native of Henderson, Ky., received his preliminary education at Murray State College, and his M.D. degree at Washington University in 1958. He specializes in anesthesiology.

Retus W. Osborn III, M.D., State Hospital, Farmington, has become a member of Mineral Area County Medical Society. Dr. Osborn is a native of Roseland, La., received his preliminary education at Louisiana State University, and his M.D. degree at Louisiana State University in 1948. He specializes in psychiatry.

Raymond W. Owings, M.D., Bothwell Hospital, Sedalia, has become a member of Pettis County Medical Society. Dr. Owings is a native of Bates City, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at Emory University in 1958. He specializes in pathology.

Carl C. Pearman, M.D., 214 Texas St., Columbia, has become a member of Boone County Medical Society. Dr. Pearman is a native of Hartville, Mo., received his preliminary education at Drury College, and his M.D. degree at Missouri University in 1954. He specializes in obstetrics and gynecology.

Herman Taute, M.D., 457 N. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Taute is a native of Aussig, Czechoslovakia, received his preliminary education at the University of West Germany, and his M.D. degree at Phillips University, Marburg, West Germany, in 1954. He specializes in obstetrics and gynecology.

Manfred Thurman, M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Thurman is a native of Mexico City, Mexico, received his preliminary education at the University of Mexico, and his M.D. degree at the University of Mexico in 1954. He specializes in internal medicine.

Manuel Tovar, M.D., 324 N. 6th St., St. Joseph, has become a member of Buchanan County Medical Society. Dr. Tovar is a native of Monterrey, Mexico, received his preliminary education at the University of Nuevo Monterrey, and his M.D. degree at the University de Nuevo Leon Monterrey, Mexico, in 1956. He specializes in general practice.

Better blood pressure response than with a thiazide alone
"A dramatic potentiating hypotensive effect with excellent reductions in pressure was noted when syrosingopine [Singoserp]...was combined with hydrochlorothiazide [Esidrix]."[1]

Lower thiazide dosage
"Hydrochlorothiazide [Esidrix] lowers the blood pressure, and its antihypertensive activity is potentiated by syrosingopine [Singoserp], allowing for a reduction of the dose of diuretic substance without a decrease in control of the disease."[2]

Less risk of rauwolfia side effects
"The combination of syrosingopine [Singoserp] and hydrochlorothiazide [Esidrix] not only has the hypotensive effects of reserpine and hydrochlorothiazide but has the added advantage of causing fewer side-effects."[3]

Indications: Mild to moderate hypertension, especially when complicated by edema.

Average Dosage: 1 Tablet #2 (syrosingopine 1 mg./hydrochlorothiazide 25 mg.) t.i.d. For patients requiring less syrosingopine, substitute Tablet #1 (syrosingopine 0.5 mg./hydrochlorothiazide 25 mg.).

Side Effects & Precautionary Measures
Singoserp (syrosingopine): Use cautiously in patients with peptic ulcer. Discontinue several weeks prior to surgery, if possible.
Occasional side effect: nasal congestion. Rare side effects: gastric irritation, drowsiness, fatigue, nausea, headache, emotional depression, skin rash, restlessness, anxiety.
Esidrix (hydrochlorothiazide): Watch for signs of fluid or electrolyte imbalance. Further electrolyte depletion may cause hypochloremic alkalosis and hypokalemia. Since the latter may precipitate digitalis intoxication, watch carefully patients taking digitalis or its glycosides.
Pay special attention to electrolyte balance of patients with severe renal or hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma. Contraindicated in patients with oliguria and complete renal shutdown.
Rare reactions: purpura with or without thrombocytopenia, skin rash, photosensitivity, urticaria. Thiazides may decrease glucose tolerance; use cautiously in diabetics. Hyperuricemia may occur but is readily reversed by a uricosuric agent.
Occasional side effects: nitrogen retention (in hypertensive patients), nausea, anorexia, headache, restlessness, constipation.

Supplied
Tablets #2 (white), each containing 1 mg. syrosingopine and 25 mg. hydrochlorothiazide; *Tablets #1* (white), each containing 0.5 mg. syrosingopine and 25 mg. hydrochlorothiazide.

References
1. Kolodny, A. L., and Dabolins, R.: Angiology *11*:180 (June) 1960.
2. Bare, W. W.: J. Amer. Geriat. Soc. *8*:795 (Oct.) 1960.
3. Lisan, P., and Balaban, S. A.: J. Amer. Geriat. Soc. *8*:803 (Oct.) 1960.

Singoserp®-Esidrix®
(syrosingopine and hydrochlorothiazide CIBA)

C I B A Summit, N.J. 2/3181MK

DEATHS

Robinson, Edward E., M. D., Shawnee Mission, Kan., a graduate of Marion Sims College, 1903; member of West Central Missouri Medical Society; aged 85; died March 26, 1964.

Monahan, Elmer P., M.D., Lenexa, Kan., a graduate of Kansas University, 1914; member of Jackson County Medical Society; aged 80; died March 28, 1964.

Hartwell, Basil O., M.D., Drexel, a graduate of the University of Illinois, 1917; member of West Central Missouri Medical Society; aged 74; died April 5, 1964.

Gillmor, Charles S., M.D., Kansas City, a graduate of Northwestern University, 1925; member of Jackson County Medical Society; aged 64; died April 7, 1964.

Kettelkamp, George D., M.D., St. Louis, a graduate of Washington University, 1914; member of St. Louis Medical Society; aged 78; died April 10, 1964.

Hines, Arthur A., M.D., Florissant, a graduate of St. Louis University, 1930; member of St. Louis Medical Society; aged 64; died April 11, 1964.

Gilliland, Oliver S., M.D., Kansas City, a graduate of the University of Kansas, 1910; member of Jackson County Medical Society, aged 80; died April 22, 1964.

MISSOURI ACADEMY OF GENERAL PRACTICE

(Continued from page 430)

er general practitioner representation in state societies and the AMA.

Reaffirmed official policy of the Academy which is in opposition to a certifying board in general practice and rejected a resolution favoring an American Board of Family Practice.

Recommended that individual delegates seek invitations for the Academy President to address medical students in their respective communities.

Rejected a proposal which would have authorized an increase in annual Academy membership dues because the finance committee report and the chairman of the board's report indicated that the Academy's present financial status does not require such an increase.

Rejected a proposal which would provide for proportional representation in the Congress of Delegates.

Rejected a resolution which would require Academy members to attain age 60 as well as 30 years in practice before applying for active exempt membership.

Rejected a resolution concerning establishment of general practice sections in medical schools and university hospitals, concurring with the reference committee's opinion that the objectives are being accomplished by existing commission programs.

Approved an active (exempt) membership certificate seal and a life member seal for membership certificates.

Expressed appreciation to Mr. A. W. Breckenkamp for a gift of $10,000.00 to the American Academy of General Practice Foundation.

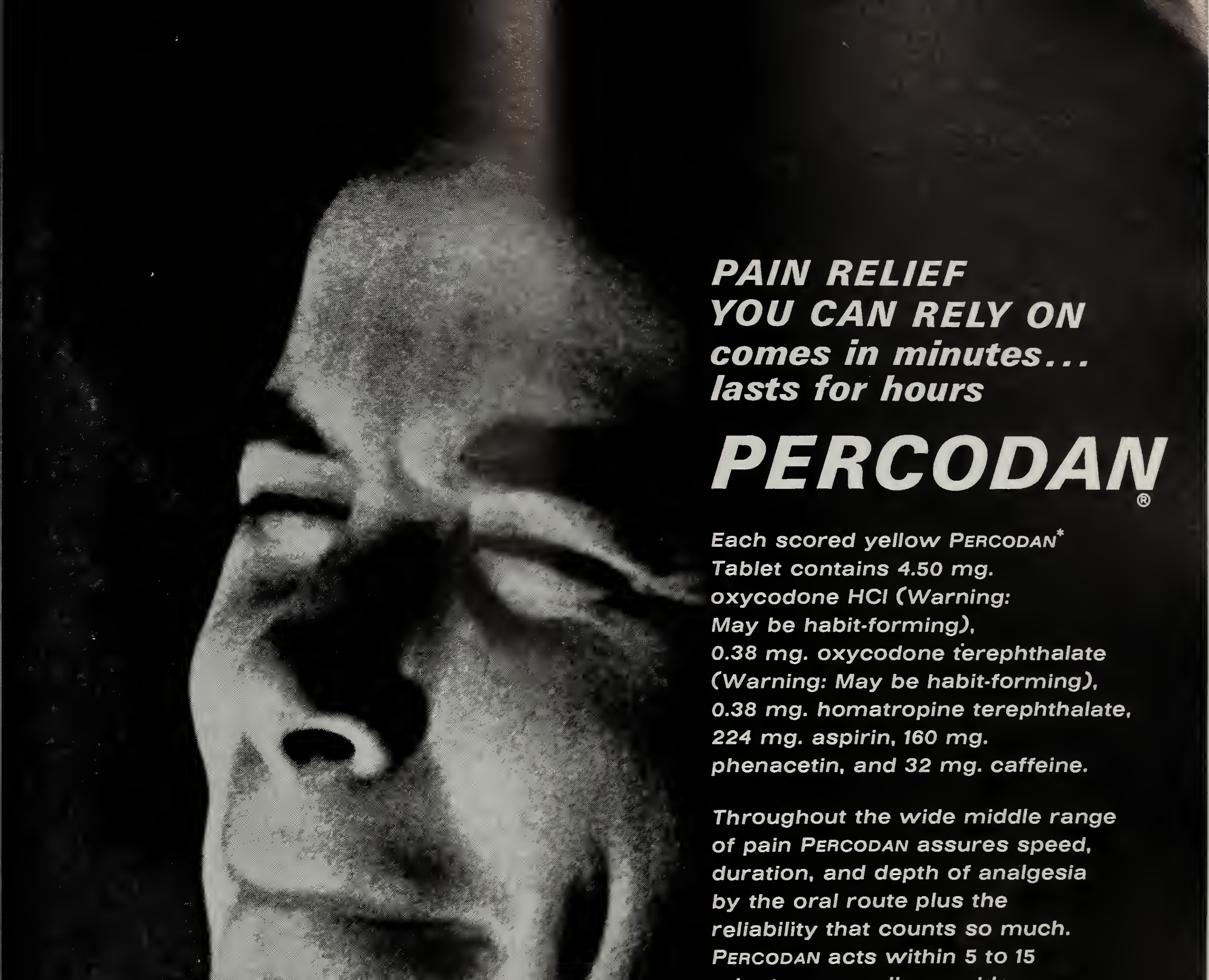
Rejected a resolution which called for a national policy statement opposing use of relative value scales, and reaffirmed policy adopted by last year's Congress that "the study and use of relative value schedules be considered at the local level and that no national policy of approval or disapproval be adopted."

Endorsed the president's plea that members cultivate their legislators, keeping them, as well as the electorate, informed on issues having to do with medical care.

Adopted a resolution opposing changes in Internal Revenue regulations which would prohibit professional service corporations from the benefit of tax-sheltered retirement plans, and urged delegates and all members to write their Senators and Congressmen requesting their support in contesting adoption of such changes in the regulations of the Internal Revenue Service.

Reaffirmed the policy adopted by the 1963 Congress of Delegates—a definite stand against compulsory type area-wide hospital planning and urged that state chapters fight enabling legislation which would convert such planning from a voluntary to an involuntary system. Also adopted was a resolution opposing such compulsory area-wide hospital planning.

Referred to the Commission on Hospitals for further study and clarification a resolution which suggests that general practice departments in hospitals be clinical units.



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County Society News

FIRST DISTRICT

JOSEPH L. FISHER, ST. JOSEPH, COUNCILOR

Buchanan County Medical Society

Dr. S. E. Meluney was presented with his MSMA 50 year pin at the April 1 meeting of the Buchanan County Medical Society. Dr. William B. Rost, society president, gave the pin to Dr. Meluney and the physician was given a standing ovation by his fellow doctors.

Forty-five members and guests attended the meeting which followed a dinner at Hotel Robidoux. Speaker for the scientific program was Dr. Galen B. Cook, staff member of the Ellis Fischel State Cancer Hospital in Columbia. He spoke on "Recent Experiences with Silicone Foam Enema."

Dr. Cook's appearance in St. Joseph was under the sponsorship of the Buchanan County Unit of the American Cancer Society as part of their professional education program during April, Cancer Crusade month. Dr. Cook noted that 120,000 lives could be saved in the next five years by early detection of cancer. His paper was well illustrated with slides and he gave a comprehensive discourse on the use and results of the foam enema in detecting cancer of the colon. Dr. Edmund W. Kline, program chairman, introduced the speaker.

Irwin Rosenthal, M.D., *Secretary*

Grand River Medical Society

Thirty-nine members, wives and guests met on April 9 at the Strand Hotel in Chillicothe for the regular monthly meeting of the Grand River Medical Society.

Following dinner John Spratt Jr., M.D., Chief Surgeon at Ellis Fischel State Cancer Hospital, Columbia, gave a discussion about the hospital and about carcinoma of the distal colon and rectum.

Following a brief business discussion the meeting adjourned.

Jack Vinyard, M.D., *Secretary*

SECOND DISTRICT

HARRY L. GREENE, HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph County Medical Society

The April meeting of the Chariton-Macon-Monroe-Randolph County Medical Society was held at the Woodland Hospital in Moberly on Thursday night, April 9. Dinner preceded the formal program.

The scientific presentation for the evening was given by Morton Pareira, M.D., Chief of Surgery at Jewish Hospital, and Associate Professor, Washington University Medical School in St. Louis. Dr. Pareira was accompanied to the meeting by Don Sauer, M.D., Chief Resident in Surgery at Jewish Hospital.

The subject discussed was "Clinical Aspects of Pancreatitis and Its Complications." The early history of the disease was discussed along with conservative medical management and then considerable detailed information on 479 patients who had undergone surgery at Jewish Hospital for pancreatitis.

Members present were: Drs. D. E. Eggleston and J. E. Campbell, Macon County; Dr. F. L. Harms, Chariton County; Drs. Josephine Baker, A. P. Rowlette, Thomas S. Fleming, R. H. Young, W. D. Chute, C. C. Cohrs, L. E. Huber, Robert Hasson, P. V. Dreyer and C. C. Smith, Randolph County.

J. Will Fleming Jr., M.D., *Secretary*

FOURTH DISTRICT

PAUL H. ROTHER, ST. CHARLES, COUNCILOR

Lincoln-St. Charles County Medical Society

A dinner meeting of the Lincoln-St. Charles County Medical Society was held at the Golfview Inn, St. Charles, on Tuesday evening, April 28. The evening festivities began with a social hour followed by dinner and then the formal program.

The scientific speaker for the evening was Arthur W. Neilson, M.D., of St. Louis, a member of the MSMA Committee on Control of Venereal Disease. Dr. Neilson spoke on the subject, "Some New Considerations in VD Management." His discussion was aided with excellent slides and every physician present was given a reprint of a recent article pertaining to this subject published in Missouri Medicine under date of November 1963.

During the business session part of the meeting Dr. Paul Rother, St. Charles, Councilor of the Fourth District, reported on important matters which were considered by the House of Delegates at the State Medical Association meeting

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder

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Typical situations in which 'Deprol' is indicated:

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Advantages of 'Deprol'

1. By relieving both depression and anxiety, 'Deprol' lifts the mood of the depressed patient without the agitation and "jitters" that often accompany "energizer" therapy alone.
2. 'Deprol' restores normal sleep, relaxes physical tensions, and improves appetite.
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5. When depression and anxiety accompany physical illness, 'Deprol' is compatible with drugs used to treat these organic conditions.

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meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

Usual adult dosage: 1 tablet t.i.d. or q.i.d. May be increased gradually, as needed, to 6 tablets daily. With establishment of relief, may be gradually reduced to maintenance levels. **Supplied:** Light-pink, scored tablets Bottles of 50.

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Dinner preceded the formal meeting.

Speaker Neilson, President Muenster and Secretary Fleming were seated together.

in March. In addition, a report was given on the first polio vaccine feeding in March and a further explanation of the next feeding to be held on May 17.

Twenty physicians were present.

R. J. FLEMING, M.D., *Secretary*

SIXTH DISTRICT

ROLLA B. WRAY, NEVADA, COUNCILOR

WEST CENTRAL MISSOURI MEDICAL SOCIETY

The April meeting of the West Central Missouri Medical Society was held Thursday, April 9, at Glen's Cafe in Butler. A total attendance—doctors, wives and guests—was 20. There was a pleasant social hour followed by an excellent dinner.

The scientific portion of the program was presented by John M. Martt, M.D., Associate Professor of Internal Medicine and Director of the Cardio-Pulmonary Laboratory at the University of Missouri Medical School, who discussed, "The Current Status of Serum Lipids in Coronary Atherosclerosis." The presentation by Dr. Martt was most informative. Everyone present learned something regarding not only his own personal health, but the better care of his patients.

Following the scientific meeting there was a brief business session. The newspaper clipping concerning the death of Dr. Hartwell, Society member from Drexel, was read. Following this, President Luter called for a moment of silent prayer in memory of Dr. Hartwell. A letter from Dr. Jack Moody to the members of the Association was read.

A discussion was held on the expense involved at the recent Missouri State Medical Association meeting and no objection was received by the secretary-treasurer regarding the expense account.

A letter from Dr. LaHue requesting transfer from active to honorary membership was read. On a motion duly made and seconded, Dr. LaHue was voted an honorary member in our organization. President Luter announced that the May meeting of the Society would be in Eldorado Springs and the June meeting would be the annual doctor-lawyer meeting in Nevada. There being no further business, the meeting was adjourned.

ROY W. PEARSE JR., M.D., *Secretary*

EIGHTH DISTRICT

DOYLE C. McCRAW, BOLIVAR, COUNCILOR

OZARKS MEDICAL SOCIETY

The Ozarks Medical Society met in Cassville, for its regular monthly meeting on Tuesday evening, April 14. The meeting was held at Crowe's Dinner House and was attended by 23 members and guests. The evening festivities began with a social hour followed by dinner and then the program.

The scientific discussion of the evening was given by Lester Wolcott, M.D., Chief, Section of Physical Medicine and Rehabilitation, University of Missouri Medical School. He spoke on "Physical Medicine and Rehabilitation in General Practice." This was an interesting, informative and well received presentation.

Joseph Gardner, M.D., who has recently moved to Reeds Spring, was welcomed as a new member in the Society. In addition to Dr. Wolcott, guests included Dr. Mary Griffin and Dr.

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16.2 mg. (¼ gr.)	phenobarbital	(¾ gr.) 48.6 mg.

(Warning: May be habit forming)

Under the pressure of modern living, with its "small continued anxieties of life,"[6] functional disturbances of secretion, tone and motility of the gastrointestinal tract are extremely common.[6,8] For the relief of symptoms associated with such disturbances—through rest for the patient, rest for the colon[3]—the drugs of greatest value have proved to be the antispasmodics and the sedatives.[3,6,7]

DONNATAL—a dependable, time-tested combination of natural belladonna alkaloids and phenobarbital—has produced excellent results in relieving visceral spasm.

DONNATAL makes peptic ulcer patients "quite comfortable"[8]... relieves epigastric pain and discomfort[2]...gives "marked relief" in spasm and irritation of the g.i. tract[5]...offers "quite high and predictable" efficiency in alterations of motility associated with gas and cramping[1]... in short, has a definite place in the physician's armamentarium because of "convenience of dosage regulation, effectiveness, safety, and economy."[4]

INDICATIONS: DONNATAL is indicated in recurring, persistent or chronic visceral spasm, as in peptic ulcer, pylorospasm, irritable stomach and colon, motion sickness, nocturnal enuresis, mucous colitis and diarrhea.

SIDE EFFECTS: No serious toxic reactions are to be expected. Dryness of the mouth, blurred vision, difficult urination, and flushing and dryness of the skin may occur with excessive and prolonged dosage.

PRECAUTIONS: Patients with incipient glaucoma or urinary bladder neck obstruction must be treated with care, as with any preparation containing a parasympathetic depressant.

CONTRAINDICATIONS: DONNATAL is contraindicated in acute glaucoma, advanced hepatic or renal disease, and known or suspected idiosyncrasy to any of its components.

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1. Asher, L.M.: Am. J. Digest. Dis. 4:260, 1959.
2. Barden, F.W., Hill, P.S., Mahaney, W.F., and Cuneo, K.J.: J. Maine M.A. 45:11, 1954.
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7. Watts, M.S.M., and Wilbur, D.L.: J.A.M.A. 152:1192, 1953.
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*This one at Olympic National Park, Washington.

O. A. Griffin of Buffalo. It was announced that the May meeting of the Society would be held at the Shadow Rock Inn in Forsyth, 7:30 p.m. on Tuesday evening, May 12.

Paul B. Anderson, M.D., *Secretary*

NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

Mid Missouri County Medical Society

A dinner meeting of the Mid-Missouri County Medical Society and the doctors' wives was held Thursday night, April 23, at the Wallace Memorial Hospital in Lebanon.

Pharmacists, hospital administrators and nurses were invited to the meeting by members of the Society and given the privilege of hearing Stanley S. Peterson, M.D., Springfield, discuss, "Future Problems Regarding Pharmacists, Hospitals and Medicine." This subject was well handled by Dr. Peterson and numerous complimentary remarks were overheard following the close of the meeting on the practical and informative way in which the subject was presented.

M. K. Underwood, M.D., *Secretary*

TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

Mineral Area County Medical Society

The April 23 meeting began with a scientific program, "Community Medical Mobilization in Disasters" conducted by Kenneth D. Mayfield, Director of Health Mobilization of the Division of Health of Missouri, and Carl Siegel, M.D., Chairman of the Civil Defense Disaster Medical Care Committee of the Missouri State Medical Association. Following their presentation there was the usual discussion period concerning application of these programs at the four hospitals represented at the meeting, in Bonne Terre, Fredericktown, Ironton and Farmington.

The business meeting began at 9:45. The success of the oral polio immunization program in St. Francois and Iron counties was noted, and it was moved by Dr. Appleberry and seconded by Dr. Watkins that the secretary write letters to the people most responsible for this success, thanking them in the name of the Society for their contributions. The motion was carried unanimously.

It was discovered that the credentials committee appointments had not been renewed at the first meeting of the year, and the following appointments were made: Dr. Appleberry, one year; Dr. Huckstep, two years; and Dr. Burcham, three years.

Application for membership submitted by Retus Osborne, M.D., Director of the Farmington State Hospital, was reviewed by the credentials committee and was unanimously approved by the membership.

Correspondence from John Irvin, M.D., of the Department of Ophthalmology of Missouri University, in reference to the establishment of Eye Tissue Banks in this area was reviewed, and the membership agreed to cooperate in the project.

Dr. Crouch discussed the current plans for "Operation Hometown" in this area and it was felt that at the present time it was not advisable. He plans to attend the State Meeting on May 17 in St. Louis in connection with this program.

In the absence of the President, George Oliver, the Vice-President, C. E. Michaelis, M.D., presided at the meeting. The meeting adjourned at 10:15 p.m.

Attending the scientific program and/or the meeting were the following: Drs. C. H. Appleberry, T. R. Burcham, Ben Bull, C. W. Chastain, F. R. Crouch, Paul Dennis, William Ford, Emmett Hoctor, M. A. Haw, A. G. Karraker, C. E. Michaelis, and G. L. Watkins, as well as Mr. James Nordstrom from Jefferson City, Mr. Hill from the State Civil Defense Office, and Mr. Lee Cunningham, the director of the disaster program in the State Hospital in Farmington.

C. W. Chastain, M.D., *Secretary*

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Manganese (as Manganese Betaine Citrate)	1.0 mg.
Zinc (as Zinc Betaine Citrate)	1.25 mg.
Magnesium (as Magnesium Betaine Citrate)	6.0 mg.
Vitamin B-1	1.5 mg.
Vitamin B-2	1.2 mg.
Vitamin B-12	6.0 mcg.
Niacinamide	10 mg.
Panthenol	10 mg.

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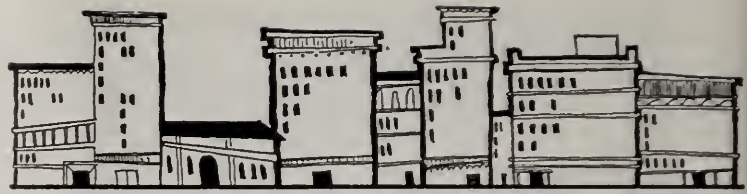

WASHINGTON UNIVERSITY

Faculty Awards

Dr. Oliver H. Lowry, professor and head of the department of pharmacology at Washington University School of Medicine, has been elected to membership in the National Academy of Sciences. The Academy was chartered as a private, nonprofit corporation by Act of Congress and signed by President Lincoln in 1863. Its purpose is to promote science and its application to human welfare and to investigate and report upon any subject of science or technology whenever called upon by the government of the United States.

Dr. Justin J. Cordonnier, professor of urology, has been awarded a Visiting Faculty Certificate by the Mayo Foundation for Medical Education and Research in Rochester, Minnesota. The certificate is one of some 10 presented annually to distinguished medical scientists who visit the Mayo Clinic to address doctors enrolled in the Foundation's residency training program and to exchange ideas with clinic physicians. Recipients of Visiting Faculty Certificates are selected from among as many as 100 visitors each year.

Dr. Justin J. Cordonnier, professor of urology at Washington University, was awarded a Visiting Faculty Certificate by the Mayo Foundation for Medical Education and Research. Dr. Cordonnier, left, is pictured with his host, Dr. Ormond S. Culp, Clinic urologist, during a staff conference.

Dr. Robert Shank, Danforth professor and head of the department of preventive medicine and public health, was selected to present the 108th annual Cutter lecture on preventive medicine at the Harvard School of Public Health during May. He spoke on "A World View of the Relationship between Nutrition and Health."

Dean Edward W. Dempsey, who had previously been named to President Johnson's Commission on Heart Disease, Cancer and the Stroke, has been named chairman of the Manpower Panel. The Manpower Panel has been instructed to assess the adequacy of our present methods of attracting young men and women into careers in health research and service. Programs for the training of supporting personnel such as nurses, technicians and research assistants will also be appraised.

Friends and colleagues of Dr. Margaret Smith, professor of pathology, made a surprise presentation in her honor during the American Association of Pathologists and Bacteriologists meeting. A check for $6,000 in honor of Dr. Smith was accepted by Dr. Estelle Brodman, librarian at the School of Medicine, as a contribution to the construction of a new library. A conference room in the proposed structure will be named in honor of the pathologist.

Computer Research

Computers have made practical mapping the minute electrical impulses of the human brain, Dr. Sidney Goldring, associate professor of neurosurgery, said at the annual scientific lecture of Alpha Omega Alpha, honorary medical fraternity. "We are now able to interpret minute electrical signals recorded from the surface of the human brain with data obtained with sophisticated bioelectric amplifiers and one of the most recently designed digital computers." The technic involves recording an electrical response in a specific area of the brain resulting from a stimulus to another part of the body.

"Obviously, caution must be exercised in assigning precise anatomical significance to any single evoked response between an electrode on the surface of the brain and a distant one of bone or muscle. Nevertheless, it is possible to readily and accurately identify sensorimotor cortex in man by this method." The cortex is the gray layer covering the brain which contains

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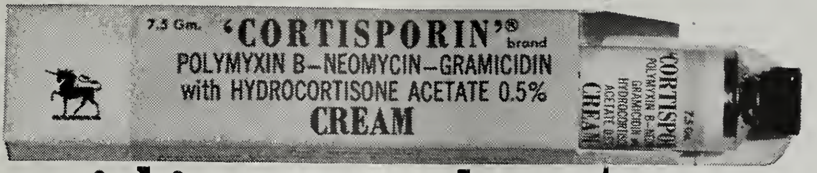
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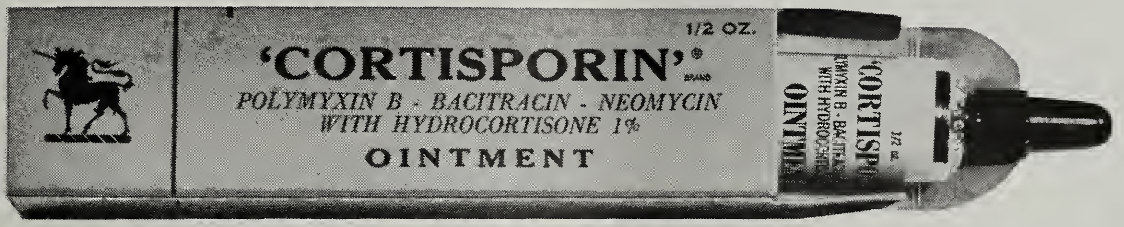
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nerves relating to both the senses and motion. Dr. Goldring traced the history of the theory of how nerves operated from the 17th century when impulses were thought to move in liquid through hollow nerve tubes to the theory of animal electricity expounded by Galvani in 1786. "However, real progress toward identifying nervous transmission with electrical propagation was handicapped by the lack of an adequate tool for measuring these small electrical currents." He said the modern era of neurophysiology was launched at Washington University by the work of Herbert Gasser and Joseph Erlanger and their development of the cathode ray oscilloscope for electrophysiological recording and the further work of George Bishop on this problem.

"One mammal's brain has been virtually unexplored by classical electrophysiological technics, namely our own," the neurosurgeon said. "This in spite of the fact that a voluminous literature exists on the spontaneous electrical activity of the exposed brain of man. There are some good reasons for this predicament. Keep in mind that the evoked activities ride on top of a sea of spontaneous brain waves. It is difficult to discern the evoked responses from the spontaneous activity." Dr. Goldring said this problem was overcome in animal experiments by suppressing the spontaneous rhythm with deep anesthesia, but that was not possible in man. By complicated recording and mathematical procedures it would be possible to calculate the position of one evoked response but the time involved would be several hours. "One can readily see why such experiments have been avoided.

"However, the same job can be accomplished with the computer in some 50 seconds," Dr. Goldring said. "The LINC (short for Laboratory Instrument Computer) activates the stimulator and controls its rate. It accepts the voltages directly from a conventional vacuum tube amplifier. The responses are added while the recording proceeds, and upon termination of the final response the wave form is displayed on the tube face of the scope. The response is then photographed with polaroid film and the record is in the surgeon's hand in 10 seconds."

Dr. Goldring said the possibilities of applying the computer to brain surgery may be of tremendous value. "The technic can be used to delineate those areas of the brain involving the senses and motion so that we avoid those areas in operating. Because it gives a different pattern of electrical impulses than the commonly used electroencephalograph, we may also use it to locate a diseased part of the brain." The computer used by Dr. Goldring was designed by Dr. Wesley Clark, who is now research professor of computer science on the Washington University campus.

Health Program Scheduled

A conference for Missouri college and high school teachers of health will be held in St. Louis September 23 to 25 to brief them on advances in the health sciences.

Program plans include discussions of developments in genetics; inherited diseases; air, water and radiation pollution; mental health; rheumatic fever, atherosclerosis, cardiac surgery, venereal disease, cancer and virology.

The conference will be sponsored by the Missouri State Department of Education, the State Division of Health, the Schools of Medicine of St. Louis and Washington Universities and the Health and Welfare Council of Metropolitan St. Louis. The United States Public Health Service is also cooperating in the Institute for Educators on Advances in the Health Sciences.

Similar seminars have been held in a number of states. They originated in 1960 when the health education division of the National Education Association asked for assistance from the U. S. Public Health Service in formulating post graduate seminars for health educators.

A registration fee of $2 will be charged. Applications may be obtained from the Health and Welfare Council, 417 North Tenth Street, St. Louis, Mo. 63101. Registration is also open to college health teachers of the Illinois area of Metropolitan St. Louis.

UNIVERSITY OF MISSOURI

Visitors

On April 7, 8, and 9 Dr. Tai Sun Shin, instructor in anatomy at the College of Medicine of Yonsei University, Seoul, Korea; and Dr. Felix V. Lectura, instructor in anatomy of the Magsaysay Memorial Medical Center, University of the East, Manila, Philippines, visited the Department of Anatomy at the University of Missouri Medical Center to study and observe the teaching methods, curriculum and research projects. They are both on fellowships to study medical education in the United States. Dr. Shin is based at the Department of Anatomy at Yale University and Dr. Lectura is at the Department of Anatomy at Jefferson Medical College in Philadelphia.

Trips and Talks

Dr. M. D. Overholser, professor and chairman of the Department of Anatomy, attended the annual meeting of the Missouri State Medical

Association in St. Louis on March 9 and 10. He presented a paper entitled, "Anatomy of Experimental Hydrocephalus."

Dr. Overholser, professor and chairman; Dr. E. W. Lowrance, professor; Dr. J. W. Brown, associate professor; Dr. F. E. Doenges, associate professor, and Dr. J. A. Green, associate professor, all of the Department of Anatomy, attended the annual meeting of the American Association of anatomists in Denver, Colo. The meeting was sponsored by the Department of Anatomy of the School of Medicine of the University of Colorado and about 1,200 persons attended. Dr. J. W. Brown presented a paper entitled, "The Development of the Anterior Olfactory Nucleus in the Bat." He also attended the meeting of the Cajal Club which was held the day before the meeting of the anatomists.

Dr. F. E. Doenges, associate professor of the Department of Anatomy of the University of Missouri Medical Center, attended the annual meeting of Federation of American Societies for Experimental Biology in Chicago on April 12 to 17.

Dr. M. D. Overholser was on a MEND Orientation Tour from March 11 to 18. The tour went to San Antonio, Tex., and visited the School of Aerospace Medicine at Brooks Air Force Base, Brooke General Hospital, Fort Sam Houston and Camp Bullis. The tour then went to San Diego, Calif., where a cruise on the submarine *USS Bugara* was taken and they visited the Marine Corps Recruit Training Center, Naval Air Station and High Altitude Physiology Laboratory, and the Air Craft Carrier *USS Ticonderoga.*

Mr. J. Barton Boyle, assistant director of the University Hospital, gave a speech entitled "The Role of the Clergy in Hospital Care and for Treatment of Patients" at the Educational Building of the First Baptist Church in Columbia. The speech was sponsored by the Ministerial Alliance of Columbia.

Dr. Norman D. Asel, associate professor of dermatology, and Dr. Philip C. Anderson, assistant professor of dermatology, attended the annual meeting of the Association of Professors of Dermatology to study the technics of teaching dermatology on April 10 to 12 at the O'Hare Inn in Chicago, Ill.

Dr. Frank B. Engley Jr., professor and chairman of the Department of Microbiology at the University of Missouri Medical Center, has been appointed one of the associate editors of a new publication entitled *Health Laboratory Science.* The publication is published by the Laboratory Section of the American Public Health Association.

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Dr. Engley attended a meeting of the executive board of the Missouri Public Health Association in Jefferson City March 26. He also attended a meeting of the Missouri Branch, American Society for Microbiology at the Medical School Auditorium on April 4 and presented a talk on "Bacterial Surface Sampling Methods" April 8 at the Milk and Food Conference held at the Memorial Student Union on the University of Missouri campus.

Dr. Herbert S. Goldberg, professor of microbiology, attended the Missouri Branch, American Society for Microbiology which met in the Missouri Medical Center Auditorium. Dr. Michael H. Ivey, assistant professor of microbiology, attended the meeting also and Dr. Donald P. Durand, assistant professor of microbiology, presented a paper entitled "Inhibition of Newcastle Disease Virus Maturation."

Drs. Engley, Donald P. Durand and Herbert S. Goldberg attended meetings of the American Society for Microbiology held in Washington May 2 through 7. In conjunction with the meeting Dr. Engley will be attending meetings dedicating the new building of the American Type Culture Collection, the meeting of the editorial board of the *Journal of Bacteriology* and of the American Academy of Microbiology.

Miss Anna Shannon, associate professor; Iris Malmstedt, associate professor; Martha Nahikian, associate professor; Irma Bendel, assistant professor; Betty Jo McCracken, assistant professor; Eleanor Sloat, instructor; Cheri Krieq, head nurse (all from the School of Nursing), attended an institute sponsored by the St. Louis Regional League for Nursing Psychiatric-Mental Health Council in St. Louis on March 31. About 300 nurses attended and the topic of discussion was "Accepting the Challenge of Quality Nursing Care Through the Use of Mental Health Principles."

Dr. David G. Hall, professor and chairman of the Department of Obstetrics and Gynecology, gave a lecture on "Enzymatic Activity and Fine Structure Characteristics of Human Endometrium" at a meeting of the Kansas City Gynecological Society on March 26. Dr. Hall also attended a meeting of American Association of Professors of Gynecology and Obstetrics that was held in Chicago March 20 through 23. Dr. Hall made a talk on history and progress of the School of Medicine at Eldorado Springs, Mo. The talk was made in conjunction with the University's 125th anniversary to a professional and lay group.

Dr. Robert E. Froelich, assistant professor in the Department of Psychiatry, and Dr. Henry Guhleman, clinical associate professor of psychiatry, participated in the workshop for the Missouri Division of Health in Miami Beach, Fla. The topic of the workshop was the training of the non-psychiatric physician. The workshop was sponsored by the American Psychiatric Association, Committee on Medical Practice. Dr. Froelich also attended the 95th semi-annual conference of the Society of Motion Picture and Television Engineers. Dr. Froelich is head of medical communications. Dr. Froelich and Dr. Guhleman attended as representatives of the University of Missouri Medical School at the meeting in Jefferson City of the Division of Mental Diseases. Dr. Froelich presented a talk on the "History of Psychiatry" as one of a series of medical lectures presented to the membership of a religious group of Latter Day Saints in Independence.

Dr. Rodman P. Kabrick, Ph.D., associate professor of clinical psychology, attended the annual meetings of the American Orthopsychiatric Association in Chicago. Dr. Kabrick also participated in the formulation of standards of training of child clinical psychologists within the American Association of Psychiatric Clinics for Children in Chicago.

Dr. James M. A. Weiss, professor and chairman of the Department of Psychiatry, was one of six main speakers to address the Second Annual Symposium on Research in Neurology and Psychiatry of St. Louis University School of Medicine. Dr. Weiss' topic was "Psychiatric Problems Associated With Aging." Dr. Weiss was elected to Fellowship status at the 1964 Annual Meeting of the American Orthopsychiatric Association. The election was made on the recommendation of the membership on the basis of Dr. Weiss' "attainments, position, publications and activities on behalf of the Association."

Dr. Gwilym S. Lodwick, professor and chairman of the Department of Radiology, was invited to participate in the activities of the forthcoming meeting of the Kansas City Radiologic Society on April 22. Dr. Lodwick's topic of discussion was "Injury and Repair in Bone." He will also participate in a diagnostic session. Dr. Lodwick as MEND Coordinator for the Medical Center attended a recent MEND Coordinator's Conference in Pensacola, Fla.; and as vice president of the board of trustees of the American Registry of Radiologic Technologists, Dr. Lodwick attended a meeting of the Board held in Tucson, Ariz. From Tucson he went to Los Angeles where he was a participant in the Los Angeles Radiological Society Midwinter Radiological Conference. With Dr. Ernest Aegerter of Philadelphia, he discussed "Controversial Aspects of Certain Tumors or Tumor-like Lesions of Bone." Dr. Lodwick also presented a talk on "Destructive and Proliferative Response to Injury in Bone." On March 7 Dr. Lodwick was a guest of the Missouri Society of Pathologists in St. Louis, at which time a seminar on bone was held. Dr. Lodwick discussed the concept of computer diagnosis, as well as giving roentgenographic interpretations of many cases.

Dr. Henry A. McQuade, associate professor in the Department of Radiology, was recently a visitor to the campus of Iowa State University. The purpose of Dr. McQuade's trip was to observe electron microscope technics in the laboratory of Professor C. C. Bowen of that institution.

A meeting of the Missouri Society of X-Ray Technicians was held on April 10 through 11 at the Statler Hilton Hotel in St. Louis. Those technologists from the University of Missouri Medical Center attending were: Mr. Darrell D. Wood, president of the society; Lillian Parker, secretary; Marjorie C. Tolan, member of the program faculty; George F. Koenig, Sharon Cushman, Richard Cushman and Melvin Ravenscraft.

As a representative of the American Society of Radiologic Technology, Mr. George F. Koenig, assistant professor of radiologic technology, attended a planning meeting for a national institute for x-ray technologists in Milwaukee. Other organizations represented were the American Hospital Association, the American Registry of Radiologic Technology and the American College of Radiology. In February, Mr. Koenig attended a meeting of the National Health Council, American Association of Junior Colleges in Chicago. This meeting was attended by educators to discuss the place of the junior college in the health fields.

Dr. G. Ray Ridings, professor of radiology, attended a meeting of the American College of Surgeons in New Orleans. This was a meeting of cancer registry directors to discuss registry procedures. Earlier in March Dr. Ridings attended a radiobiology symposium held at the M. D. Anderson Hospital in Houston, Tex. He also recently spent one week's time as an Examiner on the American Board of Radiology.

Dr. John F. Patton, associate professor and acting chairman of the Department of Surgery, gave a discussion of "Renal Injuries" at the meeting of the Audrain County Medical Society and attended a meeting of the American College of

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Surgeons in New Orleans. At the meeting he presented a paper on "Diagnosis and Treatment of Testis Tumors."

Dr. John C. Schuder, associate professor of surgery (biophysics), attended a meeting of the American Society for Artificial Internal Organs and the Federation of American Societies for Experimental Biology in Chicago. He presented a paper entitled "The Silicon Diode as a Receiver for Electrical Stimulation of Body Organs" at the A.S.A.I.O. meeting.

Dr. Kenneth K. Keown, professor of anesthesiology; Dr. M. T. Metzgar, assistant professor in anesthesiology; Robert N. Miller, M.D., and Edward E. Sammons, M.D., second year residents in anesthesia, attended a meeting of the Missouri Society of Anesthesiology at the Muehlebach Hotel in Kansas City on April 11 through 12. Dr. Keown has served as president of the society for the past year and he moderated a panel of three speakers. The panel discussion was entitled "What You Would Like to Know About."

Dr. Keown and Dr. G. W. N. Eggers, associate professor of anesthesiology, attended the 11th annual meeting of the Association of University Anesthetists in Denver, Colo.

Dr. Keown and Dr. M. T. Metzgar attended the meeting of the International Anesthesia Research Society in Las Vegas, Nev. Dr. Keown presented a discussion on the paper "Endotracheal Anaesthesia—A Teaching Challenge!" Dr. Keown was elected a member of the board of trustees of the International Anesthesia Research Society.

Dr. John A. Buesseler, professor of ophthalmology, Felix N. Sabates, assistant professor of surgery (ophthalmology), and John W. Irvine, M.D., resident physician, attended the Annual Regional Meeting of the Mid-West Region of Eye Banks in Oklahoma City. Eye banking procedures and methods for cooperation between eye banks were discussed at the meeting.

Dr. William G. Hemenway, chief of otolaryngology, and Dr. John T. Dickson, resident physician, section of otolaryngology, attended the following meetings: American Broncho-Esophagological Association, American Laryngological Association, American Laryngological, Rhinological and Otological Society, Inc., American Otological Society, Inc. and the American Society for Head and Neck Surgery.

Dr. Hugh E. Stephenson Jr., professor of sur-

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gery, served as chairman of the Reference Committee on Medical Education and Public Welfare as a delegate to the Missouri State Medical Association meeting held in St. Louis March 8 through 11. Dr. Stephenson was elected as an alternate delegate to the American Medical Association. Dr. Stephenson also presented "The Present Status of the Cardio-Pulmonary By-Pass Apparatus" (film and discussion) to the Fifth District Missouri State Nurses' Association at their Cardio-Vascular Institute and educational program on April 2 in Joplin.

ELLIS FISCHEL STATE CANCER HOSPITAL

In recent weeks, Dr. A. M. Evans, internist, has shown slides and lectured to the Kiwanis Club, Little Dixie Kiwanis Club and the Trinity Presbyterian Church Men's Club, all of Columbia, Missouri, concerning the findings of the survey and the recommendations of the Cancer Society on the Surgeon General's report "Smoking and Health." He has also shown the film "To Smoke or Not to Smoke," followed by further explanation of the effects of smoking and a question and answer session at the two junior high and senior high schools in Columbia.

John S. Spratt Jr., M.D., chief surgeon, attended the Cancer Committee meeting of the American College of Surgeons and the Cancer Workshop as Liaison Fellow from Missouri, March 20, in New Orleans. On April 9, he discussed "Neoplasms of the Large Intestine and Rectum" at the Grand River Medical Society in Chillicothe. On April 27 and 28, Dr. Spratt, Dr. Galen Cook and Dr. E. J. Schewe attended the annual meeting of the Society of Head and Neck Surgeons in Memphis. Drs. Cook and Spratt presented a paper entitled "Silicone Molds of the Human Nasopharynx."

Dr. Cook has been appointed an Advanced Clinical Fellow of the American Cancer Society and staff surgeon at Ellis Fischel, effective July 1.

Dr. Burl Dillard departed from the Cancer Hospital in February to assume the position as tumor clinic director and assistant surgeon on Unit 1 surgery at St. Louis City Hospital.

Dr. Raul Mercado Jr., chief of radiology, has been appointed as Consultant in Radiation Therapy to the Mallinckrodt Institute of Radiology, Washington University.

Dr. Geoffrey Kurrle, Assistant Medical Director of the Victoria Cancer Institute in Melbourne, Australia, visited the Ellis Fischel State Cancer

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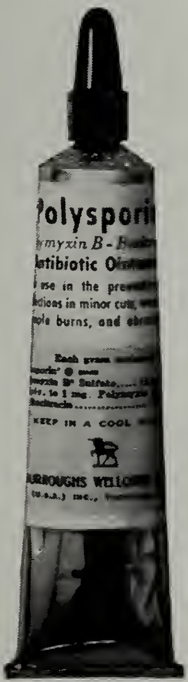

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Hospital March 31 as a guest of the Department of Radiotherapy. He spoke to the staff about the organization and operation of his hospital which provides centralized radiotherapy service for the entire province. Dr. Kurrle is visiting various cancer therapy centers in the United States to evaluate methods of operation that might be applicable to his hospital.

ST. LOUIS UNIVERSITY

Lectures

The Wisconsin Surgical Club attended a two day scientific program at Cardinal Glennon Memorial Hospital for Children and Firmin Desloge Hospital April 6 and 7. The program, sponsored by the St. Louis University Department of Surgery, provided an opportunity for the visiting surgeons to spend a day at each hospital.

The group was welcomed to Glennon Hospital by Dr. G. O. Broun Sr., dean, St. Louis University School of Medicine, and Sister Mary Francis Clare, S.S.M., administrator, Cardinal Glennon Memorial Hospital for Children. Dr. C. Rollins Hanlon presided at the two-day meeting.

An operative clinic with selected cases by Dr. J. Eugene Lewis Jr. and Dr. Francis X. Paletta and other department members was presented in the operating suite at Glennon Hospital.

Mr. John B. Warner Jr., director, St. Louis University Hospitals, welcomed the visiting surgeons to Desloge Hospital, where an operative clinic on "Aortic Stenosis" was presented on closed circuit television. The program concluded with a canine cardiac transplantation demonstration in the Experimental Surgical Laboratories.

University physicians who presented scientific lectures were: Dr. John F. Schweiss, Dr. Armand E. Brodeur, Dr. Joseph L. Lucido, Dr. William F. Melick, Dr. Charles R. Doyle, Dr. Theodore Cooper, Dr. Richard K. Danis, Dr. Edmund A. Smolik, Dr. George C. Kaiser, Dr. Don C. Weir, Dr. Thomas F. Frawley, Dr. Gene B. Starkloff, Dr. Isadore C. Middleman and Dr. Robert R. Maginn. Case presentations were by Dr. Daniel F. O'Sullivan, Dr. William J. Tierney, Dr. Michael P. Kaye and Dr. Andrew McRoberts.

A seminar on "Gynecological Endocrinology and Cytology" was presented by the St. Louis University School of Medicine's Department of Gynecology and Obstetrics at Firmin Desloge Hospital on April 23. The program honored the late Dr. William H. Vogt Jr. and Dr. Paul Fletcher.

Dr. Fletcher and Dr. Vogt both died in 1962 of heart disease. They were members of the Department of Gynecology and Obstetrics and graduates of St. Louis University.

Dr. Thomas M. Mier, acting director, Department of Obstetrics and Gynecology, St. Louis University, presided at the morning session. Main discussions were entitled, "The Cell as an Index, Why, When, and How" and "The Ubiquitous Ovum, Its Detection and Control."

Presiding at the afternoon session was Dr. Matt H. Backer, assistant clinical professor of obstetrics and gynecology. A portion of the afternoon discussion included a session entitled, "The New Look in Infertility."

Medical faculty drawn from the University's departments of obstetrics and gynecology, pathology and internal medicine were participants in the program.

University medical faculty members presented thirteen papers at the 45th annual meeting of Federation of American Societies for Experimental Biology at Chicago April 13 to 17.

The Department of Biochemistry presented four scientific papers. Participants were: Dr. Edward A. Doisy Sr., professor, and Robert L. Kelly, USPHS trainee; Dr. Harold Van Kley, assistant professor, and J. D. Padayatty, graduate student; Dr. William H. Elliot, professor, and Robert C. Sandors, USPHS trainee and Dr. John T. Matschiner, assistant professor.

The Department of Physiology presented three papers. Participants were: Dr. Alrick B. Hertzman and Sister Wilma M. Haslag, research associate; Dr. Leo C. Senay Jr., associate professor and Dr. Alfred W. Richardson, professor and Dr. Theresa Pinakatt, research associate.

The Department of Surgery presented one paper. Participants were: Dr. L. M. Napolitano, University of Pittsburgh, Dr. Vallee L. Willman, professor, Dr. Theodore Cooper, associate professor, and Dr. C. Rollins Hanlon, professor.

Participants from the Department of Biology were Dr. X. J. Musacchia, professor, and Sister Alice M. Fox, graduate student. Participants from the Department of Pathology were Dr. Drummond H. Bowden, associate professor, and Dr. Robert A. Goyer, assistant professor, and M. W. Yin, technician.

The Departments of Pathology and Biology jointly presented a paper. Participants were: Dr. George Gantner Jr., associate professor, Janet Aune, graduate student, and Dr. Nelson, professor.

The Department of Internal Medicine, under the direction of Dr. Thomas F. Frawley, delivered one paper. Participants were: Dr. Gerhard Muelheims, assistant professor, and Dr. Kenneth Walter, instructor.

Dr. Ronan O'Rahilly, professor of anatomy, and Dr. W. Fischlschweiger, assistant professor of anatomy, presented a paper at the 77th annual meeting of the American Association of Anatomists in Denver.

Alumni Reunion

The Medical Alumni Association's reception and dinner dance, given in conjunction with the American Medical Association meeting in San Francisco, will be held Wednesday, June 24. The reception will begin at 6:00 p.m. in the Colonial Room, St. Francis Hotel, Union Square.

Founders Week Committee

The Medical Alumni Association's 1964 Founders Week Committee has been announced by William C. Trigg Jr., executive secretary. General Chairman is Dr. Sam J. Merenda; Dr. G. O. Broun Jr. is clinical Academic Chairman and Dr. Bart Cole, Class Reunions General Chairman. Class Reunion Chairmen and the classes they will represent are: Dr. George T. Gafney, 1919; Dr. Daniel L. Sexton, 1924; Dr. Howard L. Lange, and Dr. Raymond O. Muether, 1921; Dr. Michael F. Pernoud, 1944; Dr. Dermott A. P. Smith, 1949; Dr. Joseph B. Vacca, 1954, and Dr. Harold J. Ott II, 1959.

LEO H. POLLOCK, M.D.

Missouri Medicine in Review

FORTY YEARS AGO

The office of the Missouri State Medical Association will be moved June 15, to 901 Missouri Theatre Building. All communications should be addressed to that number.

The Sixty-seventh Annual Meeting held at Springfield, May 6, 7, 8, 1924, was in every respect except that of attendance fully up to the expectations of interest and work accomplished. The registration showed that only 365 were at the meeting. The guests were enthusiastically received. Dr. W. A. Pusey, Chicago, President-elect of the American Medical Association, gave an address on the work of the parent body which was illuminating. Dr. F. C. Warnshuis, Grand Rapids, Michigan, speaker of the House of Delegates of the American Medical Association, made a vigorous appeal to the members to take an active interest in the work of county, state and national associations. One of the most interesting features of the meeting was the scientific exhibits conducted by Drs. W. W. Duke, on pollens; Willard Bartlett, on goiter; Paul F. Cole on diagnostic x-ray studies. The presidential address by Dr. G. Wilse Robinson on "The Victories of Medicine," reviewed some of the outstanding triumphs that reputable medicine has accomplished in the past few years and made a plea for reducing the number of insane persons. Dr. A. R. McComas, Sturgeon, was elected Chairman of the Council. The invitation to meet in Kansas City in 1925 was unanimously accepted.

TWENTY-FIVE YEARS AGO

The American Medical Association held its ninetieth Annual Session in St. Louis, May 15 to 19, the sixth time the Association has convened in St. Louis. In the House of Delegates the Missouri State Medical Association was represented by Drs. A. R. McComas, Sturgeon; H. L. Kerr, Crane; R. Emmet Kane, St. Louis, and James R. McVay, Kansas City. Dr. Alphonse McMahon, St. Louis, was elected Vice President of the Association. Dr. Olin West, Chicago, was reelected secretary and general manager, Dr. Herman L. Kretschmer, Chicago, was reelected treasurer; Dr. H. H. Shoulders, Nashville, was reelected Speaker of the House, and Dr. Roy W. Fouts, Omaha, was reelected Vice Speaker.

The Council of the Missouri State Medical Association met in St. Louis in the Council Room of the St. Louis Medical Society Building on May 14 at 10:00 a.m. Dr. Curtis H. Lohr, St. Louis, Chairman, presided. In attendance were Drs. A. S. Bristow, Princeton; Curtis H. Lohr, St. Louis; R. B. Denny, Creve Coeur; W. A. Bloom, Fayette; A. J. Campbell, Sedalia; E. P. Heller, Kansas City; H. L. Kerr, Crane; E. J. Nienstedt, Sikeston; James R. McVay, Kansas City, President; C. E. Burford, St. Louis, President-Elect; R. L. Thompson, St. Louis, Treasurer.

The special committee named by the Council to study the problem created by the refugee physicians coming into the State of Missouri met in Kansas City on Sunday, March 19, 1939.

TEN YEARS AGO

John, son of J. Loren Washburn, M.D., Versailles, is the recipient of The God and Country Boy Scout award.

New officers of the Missouri Society of Anesthesiologists elected in April are: president, W. W. Tillman Jr., M.D., Springfield; president-elect, Seymour Brown, M.D., St. Louis; vice president, Joan Goebel, M.D., St. Louis; secretary-treasurer, Russel Shelden, M.D., Kansas City; and delegates, Oral B. Crawford, M.D., Springfield, and Jean Merz, M.D., St. Louis.

Seven members of the class of 1895 of the Missouri Medical College held a reunion in St. Louis on May 5. Those attending were R. E. Schlueter, M.D., Robert J. Terry, M.D., A. T. Quinn, M.D., St. Louis; C. G. C. Ahlbrandt, M.D., Kirkwood; John Zahorsky, M.D., Steelville; N. T. Enloe, M.D., Chico, California, and E. P. Staff, M.D., Ramsey, Ill.

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References: **1.** Szymanski, F. J.: *Indust. Med.* 30:498, Nov., 1961. **2.** Wexler, Louis: *Clin. Med.* 70:404, Feb., 1963. **3.** Hodges, F. T.: *GP* 14:86, Nov., 1956. **4.** McLean, I. E. D.; Graham, K. T., and East, M. O.: *Practitioner* 189:82, July, 1962.

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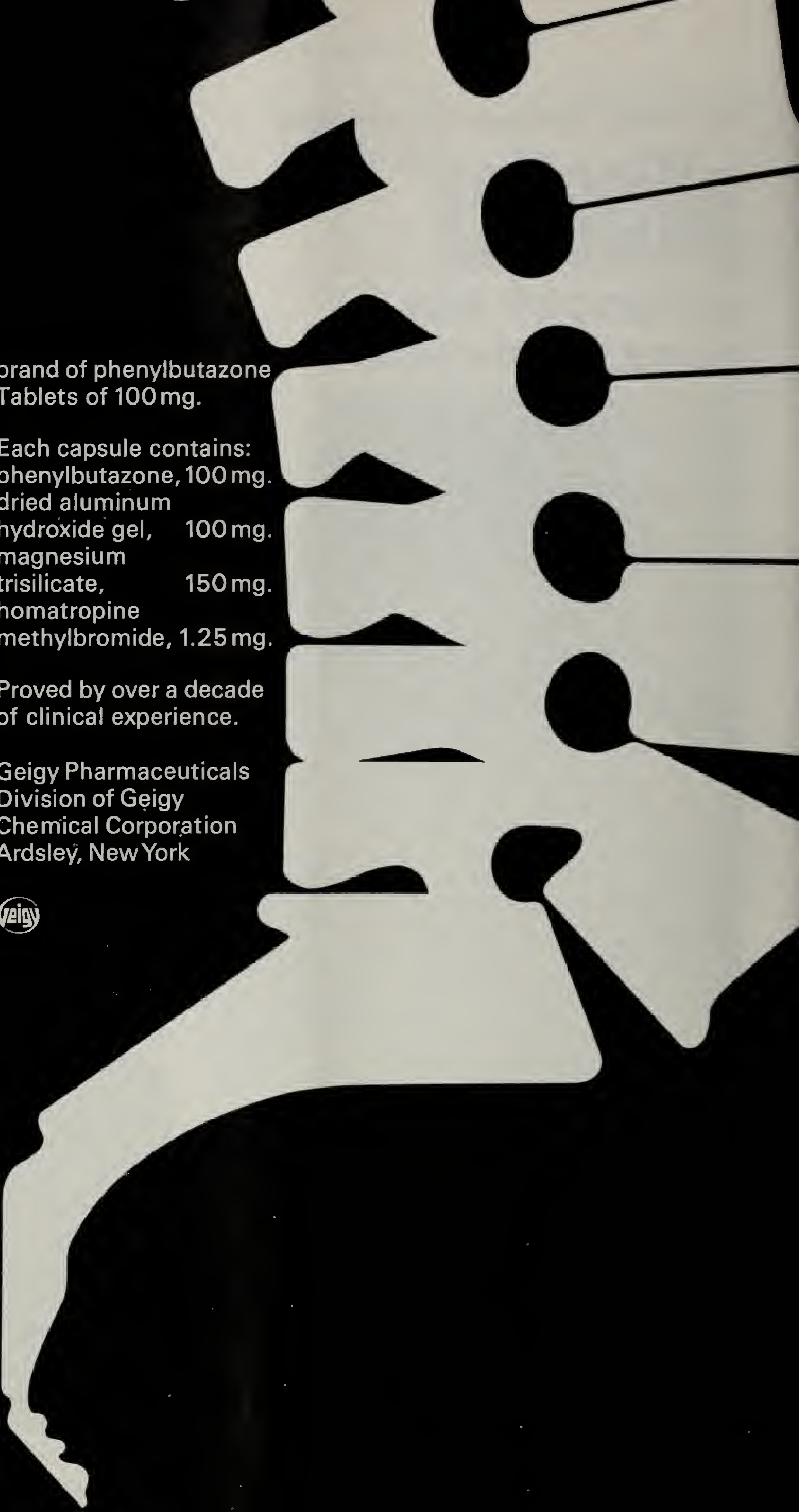

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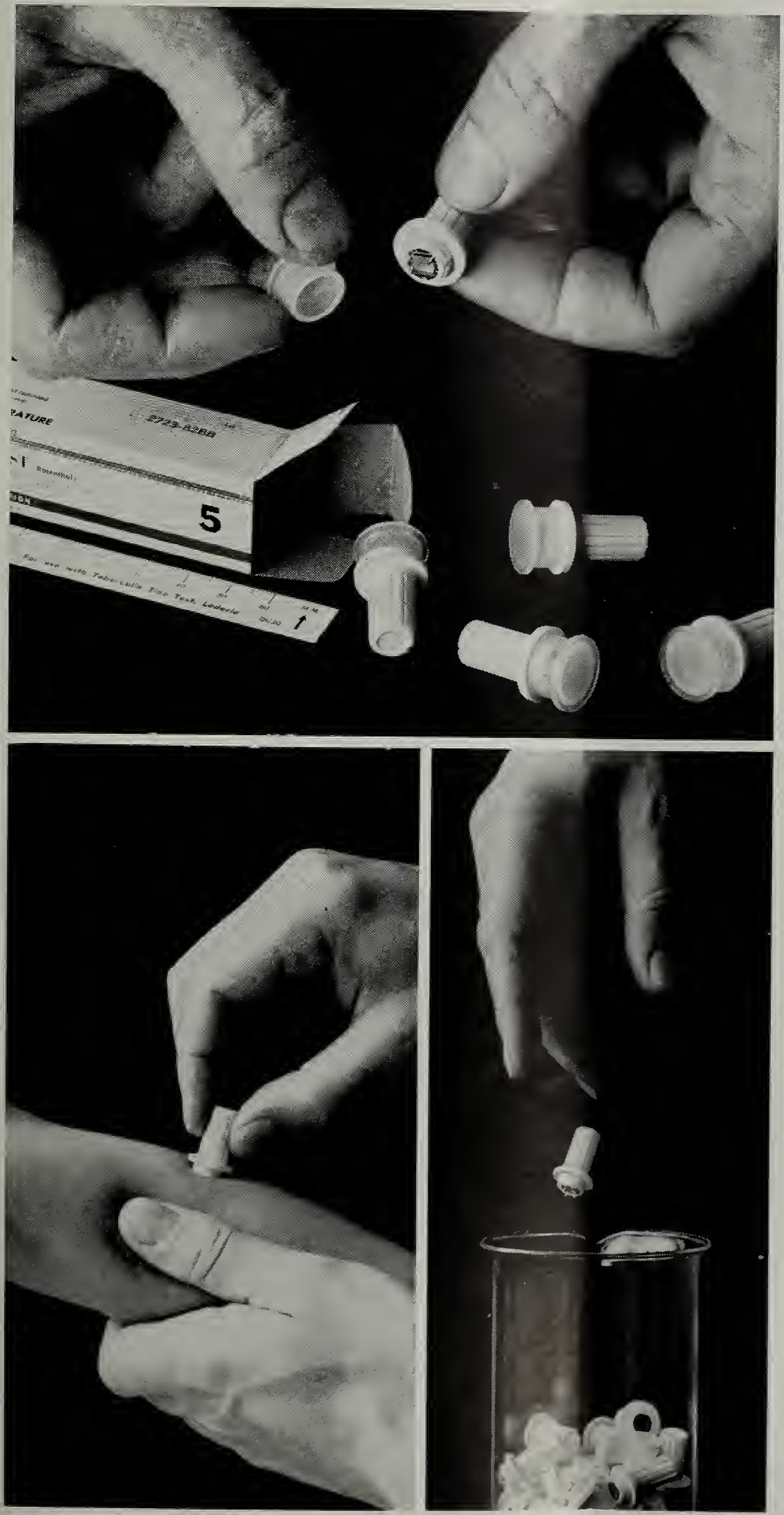

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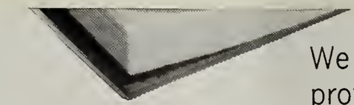

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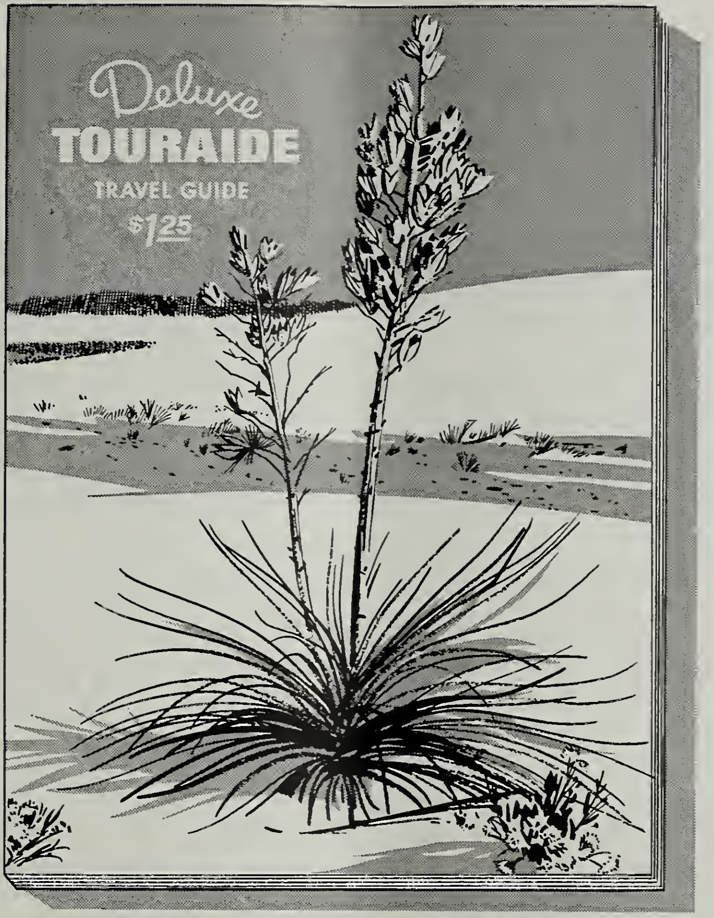
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Singoserp (syrosingopine): Use cautiously in patients with peptic ulcer. Discontinue several weeks prior to surgery, if possible.

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Esidrix (hydrochlorothiazide): Watch for signs of fluid or electrolyte imbalance. Further electrolyte depletion may cause hypochloremic alkalosis and hypokalemia. Since the latter may precipitate digitalis intoxication, watch carefully patients taking digitalis or its glycosides.

Pay special attention to electrolyte balance of patients with severe renal or hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma. Contraindicated in patients with oliguria and complete renal shutdown.

Rare reactions: purpura with or without thrombocytopenia, skin rash, photosensitivity, urticaria. Thiazides may decrease glucose tolerance; use cautiously in diabetics. Hyperuricemia may occur but is readily reversed by a uricosuric agent.

Occasional side effects: nitrogen retention (in hypertensive patients), nausea, anorexia, headache, restlessness, constipation.

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Tablets #2 (white), each containing 1 mg. syrosingopine and 25 mg. hydrochlorothiazide; *Tablets #1* (white), each containing 0.5 mg. syrosingopine and 25 mg. hydrochlorothiazide.

References

1. Kolodny, A. L., and Dabolins, R.: Angiology *11*:180 (June) 1960.
2. Bare, W. W.: J. Amer. Geriat. Soc. *8*:795 (Oct.) 1960.
3. Lisan, P., and Balaban, S. A.: J. Amer. Geriat. Soc. *8*:803 (Oct.) 1960.

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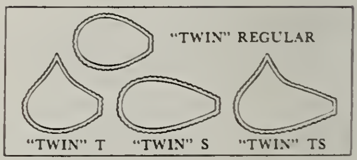

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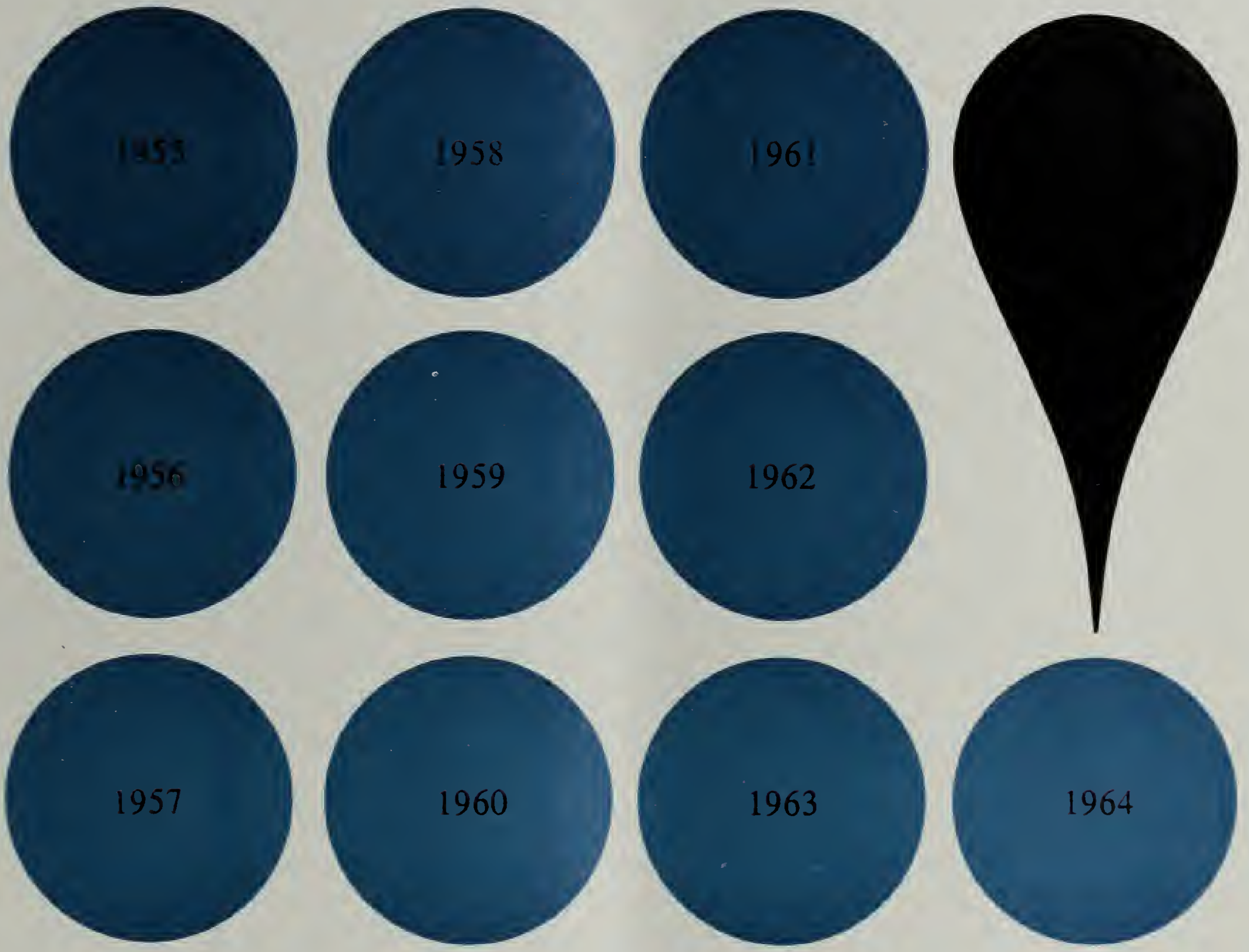
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Volume 61, Number 7—July, 1964

Missouri Medicine

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Minutes of the House of Delegates

One Hundred Sixth Annual Session

March 8, 9, 10, 11, 1964

St. Louis

Sunday Session

The first meeting of the House of Delegates of the 106th Annual Session of the Missouri State Medical Association was called to order at 1:30 p.m., Khorassan Room, Hotel Chase, St. Louis, with William C. Mixson, M.D., Kansas City, Speaker, presiding.

Officers, Councilors and Delegates present during the Annual Session follow:

Officers

President	Kenneth C. Hollweg, M.D., Kansas City
President-Elect	Leonard T. Furlow, M.D., St. Louis
Vice President	M. K. Underwood, M.D., Rolla
Vice President	Carl R. Ferris, M.D., Kansas City
Vice President	Paul F. Max, M.D., St. Louis
Secretary	John I. Matthews, M.D., Jefferson City
Treasurer	Charles R. Doyle, M.D., St. Louis
Speaker of the House	William C. Mixson, M.D., Kansas City
Vice Speaker of the House	Stanley S. Peterson, M.D., Springfield

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1st District	Joseph L. Fisher, M.D., St. Joseph
3rd District	James M. Macnish, M.D., St. Louis
4th District	Paul R. Whitener, M.D., St. Louis
5th District	Byron M. Stuart, M.D., Boonville
6th District	O. B. Barger, M.D., Harrisonville
7th District	Hector W. Benoit Jr., M.D., Kansas City
8th District	Doyle C. McCraw, M.D., Bolivar
9th District	E. A. Stricker, M.D., St. James
10th District	W. D. English, M.D., Cardwell

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Buchanan	John N. Martin, St. Joseph
Buchanan	Ernest E. Wadlow, St. Joseph
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Clay	Frank Werner, North Kansas City
Clinton	P. T. Luckenbill, Plattsburg
Grand River	
Grundy	Chester Clark, Trenton
Harrison	W. A. Broyles, Bethany
Linn	J. R. Dixon, Brookfield
Livingston	Virgil Vandiver, Chillicothe
Nodaway-Holt-Atchison-Gentry-Worth	A. L. Carlin, Stanberry
Nodaway-Holt-Atchison-Gentry-Worth	E. D. Imes, Maryville
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St. Louis City	Robert B. Bassett, St. Louis
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St. Louis City	Richard V. Bradley, St. Louis
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St. Louis City	Joseph C. Edwards, St. Louis
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Jackson	Dillard M. Eubank, Kansas City
Jackson	William W. Gist, Kansas City
Jackson	John A. Griffith Jr., Kansas City
Jackson	William M. Kitchen, Kansas City
Jackson	James R. McVay Jr., Kansas City
Jackson	Gerald L. Miller, Kansas City
Jackson	William C. Mixson, Kansas City
Jackson	Kenneth S. Nicolay, Kansas City
Jackson	Ralph Perry, Kansas City
Jackson	A. Lloyd Stockwell, Kansas City
Jackson	Charles B. Wheeler, Kansas City

Eighth District

Dallas-Hickory-Polk	O. A. Griffin, Buffalo
Greene	Kenneth E. Knabb, Springfield
Greene	Howard T. McAlhany, Springfield
Greene	Stanley S. Peterson, Springfield
Greene	William H. Snead, Springfield
Jasper	G. A. Schulte, Joplin
Jasper	M. Foster Whitten, Carthage
Ozarks	
Barry	W. J. Glass, Monett
Christian	Stanley Roper, Ozark
Lawrence	Kenneth Glover, Mount Vernon
Newton	Paul B. Anderson, Neosho
Stone	Fred Wommack, Crane
Webster	T. M. Macdonnell, Marshfield

Ninth District

Mid-Missouri	
Dent	B. J. Bass, Salem
Laclede	Rae W. Froelich, Lebanon
Phelps	W. R. Lytle, Rolla
South Central	
Howell	John E. Wilson, West Plains
Oregon	C. W. Cooper, Thayer
Texas	Joe Wall, Houston

Tenth District

Butler-Ripley-Wayne	E. T. Hansbrough, Poplar Bluff
Cape Girardeau	W. O. L. Seabaugh, Cape Girardeau
Mineral Area	
Iron	Ben Bull, Ironton
St. Francois	R. A. Huckstep, Farmington
Washington	George Creswell, Potosi
Pemiscot	O. W. Cook, Caruthersville
Perry-Ste. Genevieve	O. A. Carron, Perryville
Perry-Ste. Genevieve	Joseph Lutkewitte, Ste. Genevieve
Semo	A. P. Sargent, Sikeston

The President, Kenneth C. Hollweg, M.D., Kansas City, gave the invocation.

James M. Macnish, M.D., St. Louis, reported briefly for the General Committee on Arrangements.

Don C. Weir, M.D., St. Louis, asked that the report of the Committee on Credentials be delayed. The Speaker announced that the roll call would be marked from the delegates' credential cards.

Speaker: The next order of business is the reading of the minutes of the previous meeting. These have been published in the July 1963 issue of Missouri Medicine and unless there is objection they will stand approved as published. On motion, duly seconded, the minutes were declared approved.

The Speaker gave instructions to the delegates and appointed the following Reference Committees:

REFERENCE COMMITTEE ON REPORTS OF OFFICERS

Leo J. Hartnett, M.D., St. Louis, Chairman.
Claude W. Cooper, M.D., Thayer.
G. A. Schulte, M.D., Joplin.
Paul H. Rother, M.D., St. Charles.
Kenneth S. Nicolay, M.D., Kansas City.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

Avery P. Rowlette, M.D., Moberly, Chairman.
A. Lloyd Stockwell, M.D., Kansas City.
C. Thorpe Ray, M.D., Columbia.
Charles R. Gulick, M.D., St. Louis.
Rae W. Froelich, M.D., Lebanon.

REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

James R. McVay Jr., M.D., Kansas City, Chairman.
Walter T. Gunn, M.D., St. Louis.
O. A. Carron, M.D., Perryville.
Donald H. Giesler, M.D., Osceola.
Ernest E. Wadlow, M.D., St. Joseph.

REFERENCE COMMITTEE ON RESOLUTIONS

Robert A. Mayer, M.D., St. Louis County, Chairman.
Edwin M. Powell, M.D., Springfield.
Berneil W. Andrews, M.D., Kansas City.
Robert L. Magee, M.D., Eldorado Springs.
G. D. Shull, Jefferson City.

REFERENCE COMMITTEE ON MEDICAL EDUCATION AND PUBLIC WELFARE

Hugh E. Stephenson Jr., M.D., Columbia, Chairman.
A. P. Sargent, M.D., Sikeston.
V. D. Vandiver, M.D., Chillicothe.
William R. Richardson, M.D., Union.
Merrill J. Roller, M.D., Hannibal.

REFERENCE COMMITTEE ON NECROLOGY

Paul T. Luckenbill, M.D., Plattsburg, Chairman.
LeRoy J. Miller, M.D., Columbia.
O. A. Griffin, M.D., Buffalo.
James O. Lottes, M.D., St. Louis.
Pat A. Barelli, M.D., Kansas City.

Kenneth C. Hollweg, M.D., Kansas City, presented the President's Message.

PRESIDENT'S MESSAGE

Mr. Speaker, Members of the House of Delegates: The year since our last meeting has been a good one for medicine in Missouri. It has been a great year for me. I can never adequately express to you my thanks for the opportunity to serve in the high office of President of the Missouri State Medical Association. I can and must, however, say to all of you that the year's record was made possible only by the hard work and devoted interest of your officers, councilors and loyal staff.

The most notable success of the year was, I believe, the adoption by the General Assembly of the measures our Association advocated and the defeat of the bills we opposed. There could be no clearer indication of the fundamental esteem and regard in which the profession is held by the people of Missouri than this determination by the people's elected representatives that our viewpoint is soundly in the public interest. It is, I think, also evidence of the high caliber of the members of our House and Senate in Jefferson City.

To all the members of the Association who helped achieve this result—by personal contacts with legislators, by appearing at hearings and by writing letters—I want to express the profession's grateful thanks. In particular, we are again and even more deeply indebted to Tom O'Brien, whose judgment, integrity, good nature and common sense have earned the respect and the regard of all of us and, equally, of the members of the General Assembly.

Tom as you know, is not present at this meeting on his doctor's strict orders. I have talked with Tom and with his doctor and am happy to report that he is making a strong comeback and that he will soon be able to resume his full duties in the office.

Vice Speaker (far right) Stanley S. Peterson registers for the session.

The staff has carried on smoothly in Tom's absence as the management of this Annual Session, I am sure, will make clear to everyone. Helen Penn, Ray McIntyre, Tom Fox and the girls in the office, together with Jordan Singleton, Peggy Heilig and others of the Lemoine Skinner office make up an excellent and devoted team that Tom and all of us have learned we can rely on.

I shall not review the past year's legislative record in detail. All of us were kept informed by timely bulletins. I should like, however, to touch on one or two particulars that will have continuing importance for the Association program.

The first of these is Kerr-Mills implementation. As you know, the legislature approved a broadly extended program that made provision for the near-needy as well as for persons on the old age assistance rolls. Though the near-needy phase of the legislation was vetoed by the Governor for considerations of cost, the fact remains that Missouri is now solidly in the ranks of the growing number of states that have acted affirmatively to prove that they are capable of doing and willing to do whatever may be required to solve whatever problem there is in provision of health care for the aged. The extended Kerr-Mills program in Missouri, following lines recommended by the interim joint committee of the legislature, so ably headed by Senator William Cason, is now off to a strong start. We must continue to be concerned with the progress and further development of the program. The success of Kerr-Mills will be conclusive evidence that compulsory federal measures are not wanted and not needed by the American people.

Two other results of the last General Assembly have an important bearing on the continuing progress of MSMA toward major program goals. I refer to the defeat of the effort of chiropractors to extend their practice rights and the provision of funds that will more adequately support the Board of Registration for the Healing Arts in enforcing the practice law.

MSMA must always be vigilant in this area. It is essential to the public welfare that statutes be strengthened and vigilantly enforced to require adherence to licensing and practice standards and to combat quackery in every form. Last year the Missouri Health Council, with the strong support of MSMA, sponsored a statewide conference on quackery. That meeting will, I am confident, have a long-term influence for good. Conferences like that one—and the national session I had the pleasure of attending in Washington—should be a regular and integral part of the activity of organized medicine at all levels.

It must also be a continuing part of our Association effort to assist in every way we can the now expanding effort of the Board of Registration to enforce strict compliance with Missouri law, to investigate and gather evidence against offenders so that prompt and successful prosecution may be possible. I should at this point express the thanks of MSMA and the Council to Dr. William D. Perry, chairman of the registration board, for his courtesy in keeping us fully informed of the board's plans and problems during the year.

I should be remiss if I did not also at this time pay my compliments and give the Association's thanks to two other Missouri doctors who are rendering noteworthy public service and who have cooperated in the most constructive and helpful way with our Association not only during the past year, but for many years.

Of Dr. Mont Hardwicke, acting director of the Division of Health, I can say only that our profession in Missouri is fortunate in having in the state's chief public health officer a man who understands fully the values of our private, independent system of patient care and who works to preserve and enhance these values.

Dr. Vernon Wilson, dean of our University of Missouri Medical School, has also been a faithful attender at meetings of the Council during the year and has contributed much to our thinking, notably in relation to the growing Missouri State Medical Foundation.

And this reference to Dr. Wilson brings me to the final point I want to make in this valedictory talk.

As I have gone about the state and have had the pleasure of meeting with members of medical societies and their wives in every part of Missouri, I have been impressed again and again with the interest of our doctors in maintaining their scientific curiosity and their serious postgraduate studies. Too often, I feel, medical organizations are required to put such emphasis on socio-economic and political and related problems that we tend to overlook the fact that ours is a learned profession, a community of scientists, yes and of artists in the highest sense of that often abused word.

In this regard, I cannot help but feel there is something lacking in the relationship of the community of practicing physicians and the community of academic teachers and researchers of our university schools of medicine. If I am right in this feeling, then surely all of us, private practitioners and academicians alike, are the poorer for such a lack in understanding and rapport. And the public, our patients, are certainly the poorer.

President Hollweg addressed the House of Delegates.

I could wish to see some means devised that would encourage all of us to share a closer fellow-feeling in a common responsibility. The university scholar and researcher has much to give to and, I believe, something to learn from the practitioner daily concerned for patient care.

Ours, I repeat, is a learned profession, but it is also a serving and healing profession. We are parts—academicians and practitioners alike—of the most astonishing medical team any nation has ever known. The researching, the teaching and the doing cannot be separated from one another—not even in the life of a single physician—without making the total effectiveness of our profession somehow the less for it.

It is not the business of a lame-duck President to make recommendations for the future. At the same time, I cannot help but urge the Association to consider if there may not be some way in which the great university medical schools of our state and the whole body of our practicing physicians may work steadily toward closer understanding and cooperation in the interest not only of the profession, but of the public.

And now, in closing, I wish to express to Leonard Furlow, my successor, congratulations and warm good wishes for the success of our MSMA program in the year ahead. In saying that I shall be eager to do everything I can to help, I know that I am only echoing the thought of every one of you.

When you get right down to it, the essential need of an association is participation, interest and devotion on the part of its members. In the year now past, I have been impressed by the degree of membership involvement I have seen.

But I should be less than honest if I did not report as well the evidence of apathy and indifference on the part of all too many.

I hope this meeting may be an occasion on which we shall see a new infusion of vigor and of effort into our total MSMA program. I hope the debates here will be full and frank. I hope every delegate will speak his mind on every matter he feels important—before the reference committees and on the floor.

In brief, I hope we shall maintain and accelerate the pace of progress toward our goals that carried us forward, as I feel, so satisfactorily in the year now past.

The Speaker referred the President's Message to the Reference Committee on Reports of Officers.

Leonard T. Furlow, M.D., St. Louis, presented the Recommendations of the President-Elect.

RECOMMENDATIONS OF THE PRESIDENT-ELECT

Mr. Speaker, Members of the House of Delegates: It is unfortunate that circumstances may arise which tend to make a meeting such as this less pleasurable than usual. The meeting together of old friends and colleagues is always an occasion for joy in reunion, but today—for the first time in 20 years—an important man in our organization is unable to be with us.

As Dr. Hollweg has explained, the seat at the Speaker's table usually occupied by Tom O'Brien is vacant, but you may be sure that Tom is awaiting a full report of your actions. I am sure that each and every one of you join me in wishing him a full and speedy recovery, for we need his presence, and I, most of all, need the benefit of his quiet but sage wisdom and advice.

This honor which you have bestowed upon me is, I can assure you, deeply appreciated. Its acceptance was with full knowledge that there was not only honor, but duty and responsibility involved, and it was a great comfort to realize that I could count on Tom! I can only repeat that I will be delighted when he is back in the office again.

If you will pardon a personal digression, I want you to know that the state of coronary arteries may influence many people besides the one who has the pain. I have been keenly aware of this since October, for it is a "coronary artery state" which has made it impossible for me to have the pleasure of my wife's participation in this meeting. Those of you who know her will know how deeply she misses being with you all.

Before I turn my attention to the year ahead, I want to take this opportunity to express my appreciation to Ken Hollweg for the superb job he has done during his term of office—and I am sure that in doing this, I speak for all of the officers and members of MSMA. Because of his dedication, his ability and his unfailing spirit, our Association has been greatly strengthened.

Throughout the past year, Dr. Hollweg has visited county societies in all parts of the state and has made local groups keenly aware of the importance of their participation in all of the activities of the state Association. Now, I am counting heavily on your continued cooperation in the coming months.

The medical profession throughout the nation has, today, one overriding problem—and you know what this is: the threat of the federal government gaining a foothold of control over the practice of medicine through the King-Anderson bill.

I am not going to spend a lot of time talking about the specifics of King-Anderson because I do not think I have to convince you of its danger. You know as well as I that it proposes an unnecessary program—because what need does exist is being met on state and local levels. You are aware that its cost would be staggering. We all realize, too, that it would be the first step toward a compulsory scheme of federal medicine for the entire population.

This is not a new threat and not a new fight. By now, none of us should be surprised at our opponents' eagerness to destroy a system of medical care second to none in the world. But since this is what the result would be, it is our responsibility to spearhead the fight to preserve private medicine, and along with it—private enterprise.

To do this, we must not only fight the King-Anderson bill directly. As doctors, we have certain responsibilities which we must accept if we are to combat the false image of our profession which skilled propagandists are using to gain public support for federalized medicine.

One of these responsibilities is to provide whatever aid and assistance we can in the training of young people in our profession. Here in Missouri, we can do this through support of the Missouri State Medical Foundation, our own student loan fund.

This is a cause dear to my heart and, I hope, to many of yours. During its three-and-a-half years of operation, the Foundation has granted loans to 103 medical students, all permanent residents of our state. Without this help, many of these young people simply would not be able to continue their medical training. I am sure you remember that part of the Hippocratic oath pledges us to impart our professional knowledge and skills to others—"and that by precept, lecture and every other mode of instruction I will impart of knowledge of the art . . . to disciples bound by a stipulation and oath according to the law of medicine." Obviously, we cannot all be teachers—but I believe we can fulfill this promise by giving financial assistance which helps persons of limited means receive medical training.

During the fiscal year just ended—in which 77 loans were granted—more than two thirds of the contributions to MSMF came from the assessment included in your MSMA dues. Perhaps you wonder why, then, we must frequently ask for additional contributions from county societies and individual members. There is a simple answer to that question—each year we are getting more and more requests for loans from qualified students.

I am certainly aware of the multitude of worthwhile causes and projects which vie for our financial support but to me, the student loan fund deserves a special place among them. Every dollar given to MSMF is used for only one purpose—to help a Missouri student of limited means become a doctor of medicine. When you contribute, you serve both the public and your profession, for both will benefit from the services of these dedicated young people, and it is my personal conviction that eventually the Foundation will be a real influence in returning physicians to areas which have suffered because of a tendency toward migration to larger centers of population.

MSMF is now in its most difficult period since the loans already granted will not come due for repayment until the recipients have completed their training and have been in practice for a year. Within the next 10 years, we anticipate that the program will become more or less self-sustaining—but today, we must be concerned about the present need—about those students who will come to us for financial assistance this fall.

Let's not force these worthy young people to look to the federal government for aid—there's nothing the foes of our private system of medicine would like better. By increasing our own support of MSMF and by actively soliciting contributions from interested persons outside the medical profession, we can insure the continued success of the Foundation and thereby make clear our determination to maintain private medicine in every way possible.

I want, also, to bring to the attention of the House what I feel is another responsibility of the medical profession today in Missouri. That is our obligation to keep abreast of the progress being made in our state's developing mental health program.

The care and treatment of mental disorders is a vital part of modern-day medicine. As physicians, we must not only be concerned with the medical phases of this problem, but, wherever possible, must be in a position to help guide and direct public mental health programs.

As you probably know, the federal government, through the new program for the mentally retarded, is apparently soon to become more deeply involved in mental health efforts. While, certainly, the medical profession should maintain a major role in mental health—I am convinced that this will not be the case unless we continue to show our active concern and offer our active cooperation and help to the persons in charge of our state programs.

This is something that should not be let go by default. Not only should the state Association be active in this area, but the local societies, too, must continuously strive to keep their members informed and interested. We have the chance to be in the forefront of the development of outstanding programs of care in this area—we should make sure we take good advantage of our opportunity.

Now I want to turn to our direct fight against King-Anderson.

Dr. Furlow gave the recommendations of the President-Elect.

I have two strong recommendations: One, we must step up our support of MMPAC, our statewide political action committee. Two, we must activate the "Operation Hometown" program throughout the state. The separate but inter-related jobs of MMPAC and "Operation Hometown" must be done—and be done well—if we are to defend our profession against federal control.

I do not have to tell you how important the results of the 1964 elections will be to us—but I am going to say that unless we all support MMPAC substantially with our dollars, these results could be disastrous. Our political action committee cannot help candidates at the polls with good wishes—for, unfortunately, good wishes will not pay for mailings, for advertising, or for any of the other things which are necessary for a successful political campaign today.

In one of the letters we received from Dr. Ralph Perry during the last year, he asked if the preservation of private medicine was not worth $25 in MMPAC dues. If you did not think about that question then, I wish you would now. Is not it worth $25, and more, to make our voice heard at the polls? To combat our opponents' vast financial and propaganda resources? To keep the federal bureaucracy from stepping in as a third person in our doctor-patient relationships?

Of course it's worth it—and I urge each of you not only to join MMPAC yourselves here and now, but to go back to your own communities and counties and become tireless salesmen for this vital program.

The second part of our direct fight against King-Anderson is "Operation Hometown." Every component society of MSMA—large and small—should now be putting this program of public education into operation. Advocates of this bill want it passed before November—and if we are going to inform the people in our home communities in time for them to join us in effective opposition, we cannot wait any longer to begin.

Most of the activities suggested in the "Operation Hometown" plan are aimed at getting the true facts about King-Anderson before the people—and I truly believe that once the public knows the facts, they will recognize the fog of propaganda being spread by our opponents as flim-flam and nothing more. They then, as individuals and through their own professional and civic organizations, will stir up enough grass roots feeling against the bill to bring about its defeat.

But we have to see that they get the facts. That job has been made easy through the well-planned program provided in "Operation Hometown." The program is applicable to any medical society, no matter what its size, and I ask that each of you take the responsibility of seeing that this program begins functioning in your society immediately.

Medicine, because it is a high profession, is under attack and we can expect such attacks to continue. We can combat this in still another way, and that is by doing all we can to make our Association a strong, efficient organization. In this regard, I want to discuss a matter which will be included in the Report of the Council and which you delegates will be asked to consider and act upon.

For as long as I can remember, there has been no uniform policy in MSMA regarding the time that officers are elected by the county societies. During this last year, as I have become better acquainted with the administrative side of our Association, I have realized that there is a great need for such uniformity. It would, in fact, be advantageous if all county society elections were completed by the end of October of each year.

This would facilitate the collection of annual dues by local societies and by MSMA. The dues billing forms sent out by the state office in December of each year must give the name and address of the county secretary as the person to receive members' dues. This information must, in turn, be received by the Association by mid-November to allow the staff adequate time to prepare the bills. Since many societies do not hold elections by mid-November under present arrangements, many forms give the name of the out-going secretary—and a lot of people are forced to do a lot of unnecessary work as a result. If officers were elected at an earlier date, this problem would be eliminated.

Uniform, early elections would also give everyone chosen as a delegate to the House a greater opportunity to become familiar with and discuss current issues in preparation for the annual session.

I am sure that you will agree that the information you receive in the Delegates' Handbook, several weeks in advance of the meeting, is helpful. However, if delegates were chosen by the end of October, they would have ample time not only to become better acquainted with vital issues and problems through materials available to the MSMA membership, but they would also be able to discuss these topics thoroughly with their District Councilor, and, particularly, with their local officers and colleagues.

This point is important, because, as delegates, you are the representatives of your societies in the Association's policy-making body. The greater your opportunity to study the problems and to know the views and wishes of your society, the more able you will be to represent those views in the deliberations of the House. I think that this would be a definite advantage to every society.

Finally, I urge you to accept the Council's recommendations concerning the time of local society elections in order to implement a program which I believe would be of great value to the Association and county societies alike. That is a plan to hold annual workshops for the orientation of newly-elected society officers.

Such workshops would have two major functions: first, to acquaint local officers with the issues and challenges of the year ahead; and, secondly, to orient them to the prerogatives and responsibilities of their offices as far as MSMA and the AMA are concerned. Such meetings would be a big step in knitting our local societies closer together and also in bringing them into a closer working relationship with the state Association.

To initiate this program, a meeting similar to what I have just described has been planned for the weekend of May 15-17 here in St. Louis. I am hoping that we will have at least one representative from each society in attendance.

Because 1964 is such a crucial election year, most of the program will be devoted to the progress of our political action and education programs. There will, however, be an opportunity to discuss problems involved in the administration of local societies and their participation in MSMA activities.

Local officers will soon receive more detailed information on the meeting, which is being planned so that participants will be able to exchange ideas and experiences in both organized and informal sessions. Personally, I am looking forward to this workshop with great expectation. If we get the response we are hoping for, we will have found a valuable way of bringing local societies into closer accord with each other and with the Association.

In closing, I want to say that I am confident that we are going to win this battle for the preservation of the independence of our profession. But it won't be an easy victory. A busy year lies ahead—and I look forward to what it will bring, knowing that I can count on your energy, your support, and, most of all, your devotion to the profession of medicine.

The Speaker referred the Recommendations of the President-Elect to the Reference Committee on Reports of Officers.

Mrs. Lawrence S. Crispell, Joplin, President of the Woman's Auxiliary, presented the following report to the House of Delegates.

REPORT OF THE WOMAN'S AUXILIARY

Mr. Speaker, Dr. Hollweg, and Members of the House of Delegates: It is indeed an honor to report to you on the activities of the Woman's Auxiliary during the last year. I only wish it were possible to mention every one of the fine achievements by our members. This year, they have been particularly challenged by the theme, "Serve and Communicate," chosen by Mrs. C. Rodney Stoltz, the national president. For many years, our county groups have made their final reports for the year under the point system if they wished to participate. The awards were given to each auxiliary that earned the most points in the four categories of membership with the gold cup being awarded to the one making the greatest number of points. Last year, the cup was won by our largest Auxiliary, Jackson County; this year's winner will be announced on Tuesday.

In reading these reports on what the counties have accomplished this year, we know that several Medical Self-Help Courses have been given under Civil Defense; there have been programs on many phases of Safety; members have assisted in all kinds of local fund drives, sponsored various health programs in mental health, diabetes, and others, and helped in planning and staffing for polio immunization under Community Service. Our auxiliaries accounted for at least 50 nursing scholarships plus sponsorship of Future Nurses' Clubs and Candy Stripers or providing literature on health careers for schools and other interested organizations. One new committee, International Health Activities, was added this year and it has been well supported, particularly by members-at-large and groups with widely scattered members. The list of individual or corporate effort is endless. Several worthwhile programs have been mentioned in my Missouri Medicine articles and the Auxiliary page of the *AMA News* has carried Missouri items five times in the last year.

Our AMA-ERF donation to date is $3,620.15 with possibly more being reported by May 1, the national deadline. This state has 223 students, interns or residents in Missouri, St. Louis, and Washington Universities using AMA-ERF funds in the amount of $249,100—only five states exceed this number and amount.

Unfortunately, most of our auxiliaries were not asked for any assistance on "Operation Hometown." An outstanding example of what could be done occurred in Jackson County where a committee of women packaged and distributed the material to physicians' offices saving time and money for the society and its executive office. The assistance was acknowledged in an article in the society bulletin which told what had been done and published Dr. Melgaard's letter of appreciation to Mrs. Stacey and her committee. Our members also distributed several hundred debate kits to public and private high school debate departments. Dozens of letters were written to congressmen and I have recommended the continuation of our support to "Operation Hometown" since it seems possible that action on this legislation may again be diverted for a while at least.

It is part of our president's duty to visit with the county or district groups throughout the state. Ozarks disbanded this year so we have 1,827 members in 27 organized auxiliaries. I visited 22, and two more were represented at a Fifth District meeting, travelling over 6,000 miles within the state. Chicago, Atlantic City and New Orleans meetings were also attended as well as the Illinois Auxiliary convention which has led to an exchange of hospitality so that their president-elect is our guest this year. A Fall Conference and Board Meeting patterned after the national workshop was held in Joplin with speakers and general discussion. One result of this discussion was that we voted to encourage a closer liaison between the students', interns' and residents' wives in our medical schools hoping to stimulate future interest in our program.

The weakest point in our structure seems to be the relationship between our auxiliaries and their medical societies. If I had one wish for a legacy from my year, it would be for a surge of support on your part for the work that we do. In an address to the AMA House of Delegates in Portland, Ore., Mrs. Stoltz said, "We will reach our greatest potential only when medical societies and auxiliaries have mutual respect, one for the other, and find areas for actual, cooperative work." The House "urged all AMA members to continue to support the Woman's Auxiliary so that it can be successful in increasing its membership, raising more revenue and broadening its range of activities." There is room for a substantial increase in our own present 69 per cent of potential and I hope future presidents will be able to report improvement.

Perhaps better understanding will be promoted through your Council's acceptance of the proposal that our Advisory Council will now consist of three members—the immediate Past President of the Missouri State Medical Association, the Chairman of your Council, and the Councilor from the district of our president. These three men will be particularly well qualified to advise us.

Missouri can be proud of the continued dedication to auxiliary work by its past presidents. This year, we have four who are active on the national level—Mrs. Stanley S. Peterson and Mrs. Henry C. Bauman are North Central Regional Chairmen; Mrs. Jordan Kelling is National Chairman of Civil Defense and was also installed as president-elect of the Southern Auxiliary last November; and, finally, Mrs. Richard A. Sutter is North Central Regional Vice-President. The National nominating committee report will be officially announced in May and we feel assured of a happy conclusion to our campaign to have Mrs. Sutter nominated as president-elect of the National Auxiliary.

Mrs. Crispell, Woman's Auxiliary President, reports to the House of Delegates.

Our Medical Student Loan Fund was voted inactive this year pending investigation by a special committee. The committee asked each county to contact its society for an opinion on the allocation of these funds. They will report to our House of Delegates on Tuesday, but there is strong evidence that you may anticipate an addition of more than $12,000 from the Auxiliary for your loan fund.

I am truly grateful for the cooperation of Dr. Hollweg, and the other members of our Advisory Council, Dr. Durward G. Hall, Dr. Vernon E. Wilson, Dr. J. Martyn Schattyn and Dr. W. Russell Smith and for the actions taken by your Council this year in our behalf. Miss Penn and Mr. O'Brien and the others in the state office have been most helpful. Your generous financial support of our *Quarterly Bulletin* and the July publication of the roster is indeed appreciated.

Thank you for your guidance and interest. We wish you a most successful convention.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Secretary, John I. Matthews, M.D., Jefferson City, follows:

REPORT OF THE SECRETARY

On December 31, 1963, the official membership of the Association was as follows:

STATUS OF MEMBERSHIP

Number of Members, January 1, 1963	3,826
New Members	220
Members Reinstated	5
Total	4,051
Members Dropped	7
Members Deceased	97
Members Transferred	60
Members Resigned	13
Total	177
Number of Members, December 31, 1963	3,874

The Committee on Nominations, which is appointed by the President from the House of Delegates, must submit nominations for the following offices:

Three Vice Presidents to fill the expired terms of M. K. Underwood, M.D., Rolla; Carl R. Ferris, M.D., Kansas City; and Paul F. Max, M.D., St. Louis.

A Speaker of the House of Delegates and a Vice Speaker of the House of Delegates to fill the expired terms of William C. Mixson, M.D., Kansas City, Speaker; and Stanley S. Peterson, M.D., Springfield, Vice Speaker.

Two Delegates and corresponding alternates to the American Medical Association to fill the vacancies created by the expiration on December 31, 1964, of the terms of Delegate Durward G. Hall, M.D., Springfield; Alternate, Guy N. Magness, M.D., University City; Delegate, H. E. Petersen, M.D., St. Joseph; Alternate, J. Loren Washburn, M.D., Versailles.

The terms (two years) of the Councilors of the odd numbered districts expire this year:

Joseph L. Fisher, St. Joseph, First District; James M. Macnish, St. Louis, Third District; Byron M. Stuart, Boonville, Fifth District; Hector W. Benoit Jr., Kansas City, Seventh District; E. A. Stricker, St. James, Ninth District. Delegates from these districts shall meet during the meeting, prior to the last day, and elect the Councilor for their District. The election shall be certified to the House of Delegates on a prescribed form which will be furnished.

The entire session will be held in Hotel Chase, St. Louis. The House of Delegates will hold its first session on Sunday, March 8, at 1:30 p.m., in the Khorassan Room. Reference Committees will meet in committee rooms in the hotel. The second session of the House of Delegates will convene at 4:00 p.m., Monday, March 9, in the Khorassan Room. The final session of the House, a breakfast meeting, will be held in the Chase Club at 7:30 a.m., on Wednesday, March 11.

Registration will open on Sunday, March 8, from 12:00 to 3:00 p.m., on Monday and Tuesday from 8:00 a.m. to 5:00 p.m., and on Wednesday from 7:00 a.m. to 9:00 a.m. Registration will be on the Lobby floor, Hotel Chase.

John I. Matthews, Secretary.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Treasurer, Charles R. Doyle, M.D., St. Louis follows:

REPORT OF THE TREASURER

The report of the Treasurer is covered in the Financial Statement. This is sent to component societies prior to the session and is published in the March issue of Missouri Medicine, so is not repeated in these reports.

Charles R. Doyle, Treasurer.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Executive Secretary, Tom R. O'Brien, St. Louis, follows:

REPORT OF THE EXECUTIVE SECRETARY

The personnel in the office, Mr. Ray McIntyre, Mr. Tom Fox, Miss Helen Penn, Mrs. Bertha Thomas, Mrs. Mary Laskiwitz, Mrs. Shirley Volk and Miss Janice Cox are deserving of the thanks of the members for devoted service to the Association. I thank each of them for their help to me.

I wish to extend my most sincere thanks to the Officers and the many members who have been so helpful to the staff and to me.

T. R. O'Brien, Executive Secretary.

The Speaker referred this report to the Reference Committee on Reports of Officers.

The report of the Committee on Scientific and Postgraduate Work, John I. Matthews, M.D., Jefferson City, Chairman, follows:

REPORT OF THE COMMITTEE ON SCIENTIFIC AND POSTGRADUATE WORK

While the Committee functions throughout the year in planning programs for component societies and obtaining speakers for these programs, one of the most important projects of the Committee is to plan and present the scientific program at the Annual Session. The Committee each year receives more help from specialty societies in selecting speakers. It is felt that this makes a much stronger program and the Committee is indebted to these organizations which give this assistance. This year, the organizations and committees which have helped with the program or taken an active part in the Annual Session are the committees on Maternal Welfare and on Trauma, the Missouri Society of Internal Medicine, the Missouri Surgical Society, the St. Louis Gynecologic Society, the Missouri Diabetes Society, the Missouri Heart Association, the Missouri Radiological Society.

The Committee is pleased to report that more and more county medical societies are planning their programs for a six month period in advance. Some are even planning programs for a year in advance. Definite advantages are gained by this procedure, such as, more choice of speakers, better program publicity, greater choice of meeting places and better prepared and delivered scientific presentations. The Committee urges all medical societies in the state to adopt, as far as possible, advance program planning.

The Committee has continued to work closely with the Education Committee of the Missouri Academy of General Practice in promoting scientific programs for many county and joint county medical society meetings over the state. Academy members, by attending such programs in which the Academy Education Committee has had a good part in developing the program, receive postgraduate credit toward Academy membership requirements. This procedure promotes better attendance at county meetings and therefore everybody gains.

The Committee is cooperating with other committees of the State Association in bringing special programs before county societies. Examples of such cooperation is with the Maternal Welfare Committee, the Medical Education and Hospitals Committee, the Committee on Civil Defense Disaster Medical Care, the Committee on the Control of Venereal Disease and the Committee on the Study of Cardiac Disease who at the request of county medical society program committees have been most helpful in this respect.

The Postgraduate Committee of the University of Missouri Medical School has furnished the Committee with a list of faculty member speakers and subjects available for scheduling at county medical society meetings. Some of these speakers were scheduled by the Committee on society programs this last fall and winter. The Missouri Heart Association, the Missouri Division of the American Cancer Society, the Missouri Division of Health, the Ellis Fischel State Cancer Hospital, St. Louis University Medical School and Washington University Medical School have all furnished programs for various county medical societies this last year.

The Committee, through the State Association office, is continuing its efforts to reduce to a minimum duplications and conflicts in medical programs held over the state by working closely with other organizations sponsoring scientific meetings, including the three medical schools of the state.

The Committee takes this means to thank those physicians who have appeared on the many scientific postgraduate programs presented over Missouri in the last year.

John I. Matthews, Chairman,
John F. McDonnell Jr.,
M. Pinson Neal,
Wyeth Hamlin,
Peter G. Danis,
Melvin C. Kasten,
John J. Modlin,
Robert W. Smith,
Richard W. Yore,
Robert F. Wortmann,
Edward D. Kinsella.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Publication, Joseph V. Finnegan, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON PUBLICATION

The 60th volume of Missouri Medicine was completed with the December 1963 issue. During 1963 there were published 39 scientific articles, 12 case reports, 15 special articles, 11 editorials, 11 President's Message, 11 Washington, 11 Across Missouri, 11 Woman's Auxiliary, 11 Ramblings of the Field Secretary, 166 news items, 91 County Society proceedings, 164 new members, 140 deaths, 34 From the Medical Schools, 11 Missouri Academy of General Practice, 11 Missouri Medicine in Review, eight miscellaneous articles, three rosters, six reports of the Council, program of the Annual Session, minutes of the Annual Session, financial statement, list of exhibitors and one index.

There were two special issues, one by the University of Missouri School of Medicine and one by the Ellis Fischel State Cancer Hospital.

There were 491 pages of advertising, eight pages of inserts and 697 pages of reading material.

Advertising in Missouri Medicine from January 1, 1963, to December 31, 1963, earned $38,215.53. Subscriptions of nonmembers amounted to $248.15, making $38,463.68 earned by the publication. The cost of production (printing and engraving) was $34,369.29.

Joseph V. Finnegan, Chairman,
Richard H. Kiene,
C. G. Stauffacher,
R. O. Muether,
Ben M. Bull.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Cancer, Charles E. Lockhart, M.D., Springfield, Chairman, follows:

REPORT OF THE COMMITTEE ON CANCER

On January 5, 1964, the Committee on Cancer met at the Missouri Hotel in Jefferson City. Present were Drs. Charles E. Lockhart, Springfield, presiding; John E. Lamy, Sedalia; James R. McVay Jr., Kansas City; G. Neil Berry, Kansas City; John S. Spratt Jr., Columbia, and Mr. T. P. Fox, St. Louis.

In the interest of improved cancer patient care and research, it was agreed by members present that a coordinated program of cancer registries should be set up. It was suggested that the Missouri Division of Health could serve as a central statistical control agency and that a standard data processing form should be developed. Discussion included also the possibility of State Legislation to implement such a program, including the surveying of other states which have enacted related laws.

Dr. Spratt reported on the individual cancer registries now in operation and will distribute copies of a roster to members of the Committee and the State Association office. Lacking a quorum, the full Committee was polled by mail for a decision on the cancer registry program. (Answers to the poll were not available at time of publication of this report.)

A pilot program of home nursing care directed by the Missouri Division of Health was commended. This particular program provides nursing service in the home rendered by specific order of the private physician using Public Health nurses.

Copies of resolution on cigarette smoking were distributed. The resolution was referred by Mr. Harry Dawdy, executive vice president of the American Cancer Society, Missouri Division, Inc. The resolution reads as follows:

Whereas, The preponderance of evidence indicates that cigarette smoking is implicated in the genesis of lung cancer and probably other diseases, and

Whereas, Other state medical associations have passed resolutions in opposition to cigarette smoking, for example Pennsylvania, California and New York, and

Whereas, The Missouri State Medical Association is interested in all matters related to the public health, therefore be it

Resolved, That the Missouri State Medical Association go on record as advocating the voluntary giving up of cigarette smoking by those already habituated, and be it further

Resolved, That the Missouri State Medical Association, through its appropriate committees, cooperate with the American Cancer Society and other organizations in making known its opposition to cigarette smoking and approving educational programs designed to influence young people to avoid the habit of smoking cigarettes.

Lacking a quorum, the full Committee was polled by mail for a decision on the resolution. (Answers to the poll were not available at time of publication of this report.)

Members present agreed that if the Committee approved the cancer registry program, that a meeting should be held at the Annual Session to discuss details of implementation. Possibly in advance of this meeting, contact would be made with the Missouri Division of Health regarding the statistical reporting system. Tentative date was set for Monday, March 9, 5:00 p.m. at the Annual Session in St. Louis. It was agreed to include this item in the poll by mail.

Charles E. Lockhart, Chairman,
Joseph L. Fisher,
George A. Carroll,
John E. Lamy,
James R. McVay,
H. C. Stricker,
Henry C. Allen,
G. Neil Berry,
E. J. Schewe.

The Speaker referred this report to the Reference Committee on Resolutions.

The report of the Committee on Medical Economics, John R. Forgrave, M.D., St. Joseph, Chairman, follows:

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

The Committee wishes to submit the following information regarding voluntary health insurance protection:

According to the Health Insurance Institute, 85.3 per cent of the population in Missouri had some form of health insurance protection in 1962. This compares with a figure of less than 60 per cent in the year 1952. This is an indication that the health insurance industry and the Blue Plans are doing an outstanding job in enrollment.

Health insurance for the aging population has shown a phenomenal growth. A report by the Health Insurance Institute states that only 26 per cent of the population over 65 were covered by health insurance in 1952, whereas 60 per cent of the senior citizens were covered in 1962.

Great progress has been made by the two Missouri Blue Shield plans in the enrollment of senior citizens. It has been reported that more than 75,000 Missourians aged 65 and over are enrolled in the various non-group medical-surgical protection plans of the two Missouri Blue Shield Plans.

The following information about the Missouri Blue Plans is provided for your information.

ST. LOUIS BLUE SHIELD

Membership, November 30, 1962	664,303
Membership, November 30, 1963	696,244
Amount paid to doctors through November 30, 1963	$11,229,154

KANSAS CITY BLUE SHIELD

Membership, November 30, 1962	442,016
Membership, November 30, 1963	437,698
Amount paid to doctors through November 30, 1963	$ 9,038,618.66

ST. LOUIS BLUE CROSS

Membership, November 30, 1962	969,183
Membership, November 30, 1963	990,187
Amount paid to hospitals through November 30, 1963	$32,577,536

KANSAS CITY BLUE CROSS

Membership, November 30, 1962	468,513
Membership, November 30, 1963	463,685
Amount paid to hospitals through November 30, 1963	$16,783,480.28

John R. Forgrave, Chairman,
Martin P. Hunter,
G. W. Winn,
Byron E. Watts,
Richard L. Sterkel,
Kenneth E. Knabb,
E. T. Hansbrough,
Rae W. Froelich,
Chester L. Clark.

The Speaker referred this report to the Reference Committee on Miscellaneous Affairs.

The report of the Committee on Mental Health, George W. Forman, M.D., St. Joseph, Chairman, follows:

REPORT OF THE COMMITTEE ON MENTAL HEALTH

One meeting of the Committee on Mental Health was held in 1963 and was convened on October 13 at the Missouri Hotel in Jefferson City.

The legislation enacted in the 72nd Missouri General Assembly was reviewed. The discussion included (a) Senate Bill No. 56, providing for the establishment of three intensive treatment centers, and (b) Senate Bill No. 57, providing for the establishment of funds for the Mental Health Centers in Senate Bill No. 56, (c) Senate Bill No. 109, concerning temporary license for physicians not citizens of the United States, and (d) Senate Bill No. 143 relating to commitment, acquittal, release and discharge of the mentally ill in criminal cases.

The Committee approved the request of Dr. George A. Ulett that appreciation be recorded from the Division of Mental Diseases to the MSMA for support and assistance with the program introduced by Dr. Ulett embodied in Senate Bill No. 56, providing for three intensive treatment centers within the state.

Dr. George A. Ulett, Director of the Division of Mental Diseases, met with the Committee. Dr. Ulett outlined future plans to include a reduction in the number of patients hospitalized, in cases in which hospitalization is not necessary, and utilization of such funds to better advantage.

Dr. Ulett, at this meeting, called attention to plans under consideration to care for retarded children across the state. Such services are to include outpatient day care for children brought to the center for care and treatment during the day while parents are employed, and purchase of land in Springfield to provide one such center is now under consideration.

Attention was directed to the plans, as recommended in President Kennedy's program, for treatment at the Missouri Mental Health Centers to include inpatient, outpatient and care for retarded children.

The Committee agreed that, for the present, Missouri should concentrate on the implementation of Dr. Ulett's program and the establishment of these three intensive treatment centers and this program was considered from a standpoint of progress in combating mental illness, to be keeping abreast if not surpassing such efforts in other states.

Reported attempts of psychologists in the State of California, to expand their fields and status, commensurate with the psychiatric specialty of the field of medicine, were discussed. It was suggested that the Association office request the Southern California District Association for more information on this subject.

Subsequent information from Mr. H. Hassard, Executive Director of the California Medical Association, explained that California does have a Certification Law for Psychologists, setting forth quite well the manner in which they may practice. Mr. Hassard was unaware of any effort being made to amend the present law and believed the law was working satisfactorily.

Dr. Ulett reported on the latest developments of the investigation by an Interim Legislative Committee of the St. Joseph State Hospital at St. Joseph. Dr. Ulett reported his complete support of the superintendent in his administrative actions investigated by the Committee.

In the interest of providing the best patient care in Missouri mental institutions and to protect the medical profession while in the process of providing such care, it was suggested that developments in St. Joseph be followed closely by the Committee and by the Missouri State Medical Association.

If some action should become necessary, it was agreed that the St. Joseph Mental Health Association might consider appointment of a special committee of physician members of the Eastern and Western Missouri Branches of the American Psychiatric Association to study conditions in the St. Joseph State Hospital. Further outside disruption of the administration of that hospital at this time seems to have largely abated.

A subcommittee on insurance headed by Dr. George Lawrence, having been appointed at the December 2, 1962, meeting of the Committee, submitted a to-date report. Dr. Lawrence is awaiting information from Al Frank, M.D., of the Missouri Eastern Division Committee on Insurance. It was agreed that further studies should be made, including reports of negotiation with labor unions on new and revised labor contracts, which include mental health coverage.

Within the last year, and at the request of the Missouri State Medical Association Committee on Mental Health, Speakers Bureaus have been set up in both the Eastern and the Western Missouri District Branches of the APA, together with the subject choice of each speaker. This Bureau of Speakers is now on file at the Missouri State Medical Association office in St. Louis and through them any group desiring a lecture or an address in almost any particular phase in the field of mental illness and mental health can be procured through that office.

Delegates listen to a report to the House.

For the purpose of advancing knowledge and interest in the field of mental illness and health, considered at this time to be one of the greatest problems facing the medical profession, letters have been forwarded to the presidents of the respective county societies urging that committees on mental health in each respective society be created. Unfortunately, this has not until the present time, met with success. Four such committees have been established up to the time of this report. We have not received responses from other such letters, but plan to follow this up in the near future with additional communications urging that such committees be created.

It is planned at this time to convene an additional meeting of this Committee sometime before the Missouri State Medical Association meeting in St. Louis in March.

George W. Forman, Chairman,
James N. Haddock,
Henry V. Guhleman,
William I. Stryker,
D. R. Edwards,
William F. Clary,
George H. Lawrence,
James M. A. Weiss,
Robert S. Terrill,
Dewey K. Ziegler.

The Speaker referred this report to the Reference Committee on Miscellaneous Affairs.

The report of the Committee on Maternal Welfare, A. C. Trueblood, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON MATERNAL WELFARE

The Report of the Committee on Maternal Welfare was presented at the December 7-8 meeting of the Council and appears in the "Report of the Council."

A. C. Trueblood, Chairman,
Irwin T. Craig,
H. C. Willumsen,
James E. Keeler,
William B. See,
C. G. Stauffacher,
J. J. Wimp,
MacDonald Bonebrake,
E. E. Wadlow,
Paul E. Kratz,
Eugene G. Hamilton,
Robert S. Brown,
Seymour Monat,
Leonard A. Wall.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Infant and Child Care, James A. Kinder, M.D., Cape Girardeau, Chairman, follows:

REPORT OF THE COMMITTEE ON INFANT AND CHILD CARE

The Committee on Infant and Child Care reported to the Council on December 8 and the report appears in the "Report of the Council."

The Committee called attention to the fact that the MSMA office, or the State Division of Health, or both, stand ready and willing to help if any area or component society decides to put on a program of oral Sabin polio vaccine.

James A. Kinder, Chairman,
E. J. Schwartz,
Daniel B. Landau,
H. E. Petersen,
E. J. LaDriere,
Guy N. Magness,
Clement E. Brooke,
James J. Pascoe,
Jack N. Wiles,
S. F. Cockerell.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Trauma, Robert E. Funsch, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON TRAUMA

The Committee on Trauma conducted no formal business during the calendar year 1963.

The Chairman of the Committee was consulted on several minor questions regarding traffic safety.

A workshop at the University of Illinois, Urbana, scheduled under the overall national program of the President's Committee for Traffic Safety, was attended by Dr. Guy Magness, as a representative of the Missouri State Medical Association, as well as Mr. Tom Fox of the Missouri State Medical Association staff. This workshop presented the various pros and cons of high school driver education. These, briefly summarized, are:

1. State should consider establishing the minimum legal age for obtaining a driver license at 18 years, except that students who have successfully completed a driver education course approved by the State Department of Education should be eligible at the age of 16.
2. Driver education programs in the public schools should be adequately financed with local and state funds.
3. School administrators should assure that the adequacy of their school's instructional programs and practices is related periodically to local traffic-safety-education needs.
4. Driver education should be organized as a separate course within the curriculum.

Some opposition has been raised regarding the cost of driver education. Auto insurance companies, however, offer reduced rates to drivers if they complete the driver education course.

Robert E. Funsch, Chairman,
Wilbur P. McDonald,
Thomas G. Otto,
Paul W. Meyer,
Richard E. Lord,
Howard J. McAlhaney,
Otis E. James,
Glenn McElroy.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Diabetes, Henry E. Oppenheimer, M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON DIABETES

Organizational: The Missouri State Diabetes Association held two meetings in 1963. In March 1963, in conjunction with the Missouri State Medical Association, Dr. Victor Pollak talked on "Diabetes and the Kidney." Dr. Pollak, who is in Dr. Kark's laboratory in Chicago, has done considerable work in this field. In October 1963, Dr. Thomas F. Frawley, Director of Internal Medicine at St. Louis University School of Medicine, presented a talk to the organization in Columbia. His talk was entitled "Steroid Diabetes."

The St. Louis Diabetes Association had as speaker Dr. W. W. Bauer, of the AMA who gave a talk in November 1963 on "Unknown Diabetics, Where Are You?" His talk was in conjunction with the beginning of the Diabetes Detection Drive.

Detection Campaigns: These were held again in Kansas City and St. Louis and were successful in discovering the unknown diabetic. In addition, the Missouri State Diabetes Association, in conjunction with the Missouri State Division of Health, conducted a detection campaign in a rural area, using Reynolds County, in its entirety as an area for detection of the unknown diabetic. The results are being tabulated at the present time but indicate interesting findings. In addition, these two groups are preparing the results of their previous campaign, at Sullivan, Mo., and hope to publish this in the near future.

Camps: Two camps were held last year for diabetic children, one, at Swope Park in Kansas City and the other at Lions' Den in St. Louis.

Research: Above and beyond the ordinary excellent research carried out in diabetes by the three medical schools in the state, the St. Louis Diabetic Children's Welfare Association has instituted a research program for study of various aspects of diabetes in children.

Appointments: Drs. Sidney Goldenberg, William H. Olmsted and Henry E. Oppenheimer were appointed to various committees of the American Diabetes Association. Dr. Oppenheimer also was reelected to the Board of Directors of the American Diabetes Association for a three year term.

Henry E. Oppenheimer, Chairman,
Harold K. Roberts,
G. Bruce Lemmon,
H. M. Gilkey,
Lucien W. Ide,
William H. Olmsted,
Ralph S. Casford,
Thomas W. Burns,
Robert E. Koch.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Control of Venereal Disease, Edwin M. Powell, M.D., Springfield, Chairman, follows:

REPORT OF THE COMMITTEE ON CONTROL OF VENEREAL DISEASE

The Committee on Control of Venereal Disease reported to the Council at the meeting of September 21-22 and the report appears in the "Report of the Council."

Edwin M. Powell, Chairman,
Robert B. Bristow,
John E. Byrne,
A. W. Neilson,
T. E. McMillan,
A. E. Belden,
L. R. Seabaugh.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Civil Defense Disaster Medical Care, Carl D. Siegel, M.D., Sedalia, Chairman, follows:

REPORT OF THE COMMITTEE ON CIVIL DEFENSE DISASTER MEDICAL CARE

The Committee on Civil Defense held its programs in conjunction with the Committee on National Defense of the Missouri Academy of General Practice.

The work of the Committee has been rather indirect, but has involved a considerable number of medical society members in several activities.

At the request of Dr. Wilson, the one day Seminar, University of Missouri, which traditionally had been held in April was moved up to December for the year 1962 and rescheduled to January for the year 1964. Consequently, no session fell in 1963. A one day session was scheduled for January 1964.

The Stateline Training Course held at Southwest State College, Springfield, May 23 to 25, drew an attendance much above anticipation, with 325 persons in attendance. Ten members of the society participated on the program in various capacities.

Four Civil Defense Emergency Hospital (CDEH) training exercises were held in 1963, one being in conjunction with the Stateline Training Course. In each of these exercises, members of the profession locally participated to some degree.

There has been a fair participation in the teaching of Medical Self Help courses. To date, 11,505 trainees have been reported. To date, 296 courses have been completed. Unfortunately reporting of completed course leaves something to be desired. As of Jan. 1, 1964, Missouri ranks fifth in the nation in the number of self help trainees.

For recognition of the progress in Missouri, in Medical Self Help Training, the United States Civil Defense committee presented the Pfizer Award of Merit, to two members of the Association—the Director of the Division of Health, and the Consultant in Health Mobilization to the Division of Health, who incidentally is the Chairman of the Committee.

Medical Self Help has been well accepted in Missouri High Schools and in many places it is an integral part of the course in "Health." This is considered to be a long step in the right direction.

Proposals for the future are:

a. Continuance of the Medical Self Help Program.

b. Formulate a workable medical annex for the Missouri Survival plan. (The Society has pledged furnishing professional service to the Division of Health for the discharge of its legal responsibility to furnish professional care in time of disaster.)

c. As part of the USPHS to identify and locate state and community stock piles of drugs and supplies.

d. Continue to aid financially the Annual Disaster Symposium at the University of Missouri Medical School.

e. Encourage a more widespread physician participation in the Medical Self Help program.

f. Encourage hospital and community disaster plans to integrate CDEH as a functioning unit.

Carl D. Siegel, Chairman,
John T. Crowe,
H. D. Steinbeck,
Carroll P. Hungate,
William F. Bell,
John H. Walterscheid,
Curtis H. Lohr,
R. Ned White,
George E. Thoma,
George L. Watkins,
O. P. Hampton,
J. S. Sanders.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Radiology and Ionizing Radiation, Milton Shoss, M.D., Cape Girardeau, Chairman, follows:

REPORT OF THE COMMITTEE ON RADIOLOGY AND IONIZING RADIATION

This Committee is deeply indebted to Dr. Wendell G. Scott, St. Louis, chairman of the Committee last year, who was appointed a member of the Missouri Atomic Energy Commission and an advisor to the Division of Radiological Health of the Missouri State Division of Health. He has been the direct contact of the Committee with the Commission and the Division of Health in regard to the development of a Radiation Protection and Control Program in the State of Missouri.

Senate Bill No. 322, which was successfully enacted in the last legislative session, establishes a Committee on Radiation Control prescribing functions, powers and duties relating to prevention and prohibition of unnecessary radiation and providing a penalty for violation of the provisions of this act. This committee is to be a subcommittee of the Missouri Atomic Energy Commission and is to be called the Committee on Radiation Control. Dr. Scott has been appointed chairman of this subcommittee before which public hearings are to be held some time in January or February of 1964. The Committee on Radiology and Ionizing Radiation is to be present to represent the MSMA at this hearing. Establishment of this subcommittee will enhance the establishment of the radiation control and survey program, allowing the use of the previously received grant from the U. S. Public Health Service of $34,000.00 to finance a program of radiological health for the State of Missouri. It is felt that this phase of radiation protection on a state level is on the move and some action in this regard may be expected in the near future. We are nearer to a state-wide system of registration and ultimately inspection of all radiological equipment within the state.

The Committee on Radiation, established by the St. Louis Medical Society and the St. Louis County Medical Society including the subcommittee on radiation control, has had some difficulty initiating the voluntary radiological survey of radiation equipment which was planned the previous year. It may be that the establishment of the state program as described will help finance and initiate this program in the metropolitan area.

The members of the Committee hope to develop a state-wide education program on radiation dangers and hazards and to further encourage and publicize the voluntary radiation surveys which it is hoped will be established throughout the state through the grant that has been received and the establishment of the subcommittee on radiation control.

Milton Shoss, Chairman,
Louis A. Scarpellino,
Marvin L. Napper,
Mark D. Eagleton,
Joseph S. Summers,
J. Stewart Whitmore,
Gwilym S. Lodwick.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Tuberculosis, Florence E. MacInnis, M.D., Kansas City, Chairman, follows:

REPORT OF THE COMMITTEE ON TUBERCULOSIS

The Committee on Tuberculosis conducted no official business during the calendar year 1963.

During the Missouri 72nd General Assembly, the Committee amended and then supported House Bill No 293 which was enacted into law October 13, 1963.

This bill provided a slight change in the definition regarding persons eligible to receive care at the Mount Vernon State Sanitorium. The new wording is as follows:

"The applicant shall present a statement to the county court, supported by a statement of his family physician, setting out that the applicant is suffering from pulmonary tuberculosis or extrapulmonary tuberculosis or chronic respiratory disease presently requiring treatment."

FLORENCE E. MACINNIS, Chairman,
PAUL MURPHY,
H. M. ROBERTS,
JOSEPH L. LUCIDO,
WALTER C. GRAY,
DAVID N. KERR,
JOHN W. POLK,
SHELDON BEECHER,
JUDSON I. CHALKLEY.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Rural Medical Service, B. J. Bass, M.D., Salem, Chairman, follows:

REPORT OF THE COMMITTEE ON RURAL MEDICAL SERVICE

The Committee reported to the Council on May 26 and this report appears in the "Report of the Council."

The Committee met on January 5 and discussed the Missouri University Medical School Preceptorship training program, and were advised that the University considered it a valuable part of the Medical School training program. They were further advised by Dr. William Mayer that the University planned to make this a requirement for all medical students as one of their electives during their third or fourth year of medical school. Dr. Baker, of the University's Family Practice Staff, outlined for the Committee the efforts and progress being made toward this goal. In general, he felt that the program to date had been satisfactory, and anticipated considerable improvement with the expanded program as outlined. Various Committee members who have had preceptees expressed enthusiasm, support and appreciation of the program both from the standpoint of the student and the practicing physician. The Committee feels that the University is to be commended for including this sort of training in its curriculum, and the Committee further feels that this will provide a continuing useful experience for those young physicians who may elect to practice in urban areas, and a strong practical experience in orientation in the problems of rural practice for those who may elect to practice in rural areas. The Committee further feels that this will greatly increase the probable supply of physicians for rural areas, which has and continues to be an urgent need of Missouri medicine.

The field of financial assistance to worthy students in training was discussed, and the various sources from which monies might come were reviewed. Note was also made of the recent federal program which has been enacted, and it was discussed for the Committee by Assistant Dean, William Mayer. The Committee and the officials at the University feel that it would be highly desirable to offer the medical student the choice of obtaining loan money from either private or federal sources. As things now stand, private programs are nearly loaned to their limits, and while the long term outlook is good, it appears that existing programs will be unable to fully meet anticipated student medical needs in the near future. A supplementary loan program from private sources was then discussed for the Committee. It is anticipated that this type program will provide adequate funds from private sources in conjunction with the other existing funds, provided it can be approved and supported by the practicing physicians in the state. This loan fund will be known as "Private Medical Education Fund, Inc.," and in cooperation with the physicians of the state and financial institutions in the state, it will be able to make loans to medical students and others who are continuing their medical education, provided that they have completed one year of medical school, and that they can be appropriately recommended by authorities of the medical institutions where they are continuing their education. The interest rate on these monies will be in the range of 2½ per cent to 3 per cent, simple per annum. The concept of this loan fund originated in the Advisory Committee of the University of Missouri Medical School because of the anticipated needs of the medical school, but has been extended to include any worthy resident regardless of what school he may be attending, both within and outside of the State of Missouri. It is anticipated that this sort of program will encourage a higher level of education in Missouri, and also will encourage doctors to return to and/or practice in Missouri, upon completion of their education. The Council of the Missouri State Medical Association has considered this supplementary program, and approved it, and has recommended that it proceed with plans to function as a supplementary loan program. In essence, the fund will raise its monies by selling a Certificate of Investment in $200 and $400 denominations to interested physicians throughout the state. The certificates will bear 1 per cent interest to the investor. They may be purchased under one of three options: (1) direct purchase; (2) installment purchase; (3) by paying the interest on one of these certificates of purchase for a specified period of time, with the bank hence making the money available to the fund for loan, and the doctor never actually owning the certificate of investment. The interest for this type of option, of course, is tax deductible. A detailed outline of this project will be submitted soon to both the *Missouri Family Doctor* and MISSOURI MEDICINE for publication.

The Committee also discussed at length the future mental health program and plans for mental health care in Missouri. The Committee expressed keen interest in this program and all members felt that mental health in Missouri was and will continue to be a problem of primary interest, in particular, to the physicians practicing in rural Missouri. Because of these expressions of interest, and the desire to obtain more information concerning this program as it will relate to health care and practices in Missouri, the Committee plans an additional meeting devoted primarily to this subject in approximately thirty days. A supplemental report will be made following this meeting.

The AMA sponsored Rural Health Conferences were discussed, and Dr. B. J. Bass reported on the Rural Health Conference which was held last year in Hot Springs, Arkansas. It is the feeling that the AMA is doing an excellent job in coordinating and directing the interest of a wide group of people in services with respect to rural health, and it is the desire of this Committee to support this in any way possible. The Committee desires to commend the efforts of the AMA in this direction to all members of our own Missouri State Medical Association.

The Committee adjourned until notification of the second meeting is made for further consideration of mental health care in Missouri.

B. J. Bass, Chairman,
Robert E. Tribble,
James H. Sweiger,
K. S. Latham,
H. F. Hoelscher,
James E. Campbell,
Charles A. Worley,
Fred L. Wommack.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Medical Education and Hospitals, William A. Knight Jr., M.D., St. Louis, Chairman, follows:

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

As directed by the MSMA House of Delegates, the following resolution having to do with compensation of interns and residents was introduced by the Missouri delegation at the AMA House of Delegates meeting at their 1963 session in Atlantic City, New Jersey, June 17-20, and became known as resolution No. 17:

Whereas, Special and Supplementary Reports on Compensation of Interns and Residents were submitted by the Councils on Medical Education and Hospitals and on Medical Service at the November 1962 Clinical Session of the House of Delegates of the American Medical Association for interim study by the House, and

Whereas, Since the true purpose of intern and resident training programs is to provide those in training with educational opportunities, experience and high standards of medical ethics in order to enable them to become competent and responsible physicians, and

Whereas, The medical profession should therefore reject a basic principle considered in the report as fundamental in determining compensation for interns and residents—namely, that a graduate physician serving as an intern or resident should receive financial support commensurate with his professional responsibilities, with due recognition of his educational opportunities, and

Whereas, While the right and need of house officers to receive a living wage is recognized, interns and residents are primarily engaged in an educational experience and their work is not to be considered either as that of a practicing physician or as a source of financing for the training programs or other activities, and

Whereas, The problem of compensation for interns and residents has been, is, and should remain the function of the individual hospital concerned; therefore be it

Resolved, That the House of Delegates of the American Medical Association rejects the principle of the report's suggested formula for compensating interns and residents from funds provided by the hospital, attending staff and patients in proportion to the benefits received by each from the services of the house staff, and be it further

Resolved, That the House of Delegates opposes any attempt to implement the special and supplementary reports on compensation of interns and residents published in *The Journal of the American Medical Association* of October 27, 1962, page 459, et sequitur.

This resolution and four others relating to the same subject were referred to the Reference Committee on Medical Education and Hospitals of the AMA along with the special and supplementary reports on compensation of interns and residents submitted by the Councils on Medical Education and Hospitals, and on Medical Service.

The following represents the Report of the Reference Committee of the House of Delegates, including amendments, and in this fashion was adopted by the House by a vote of 98 for to 87 against:

"The report of the Council on Medical Service and the Council on Medical Education and Hospitals on 'Compensation of House Officers' represents a well-intentioned effort to find a solution to a most difficult, if not impossible, problem. All but one of the numerous speakers to this issue opposed the proposal.

"After serious thought your reference committee came to the conclusion that the report should be disapproved and we so recommend. We therefore recommend that in the view of the overwhelming opposition to the basic proposal contained in the report of the Council on Medical Service and the Council on Medical Education and Hospitals, the AMA record itself as opposed to any system or program by which any part of an intern's or resident's salary is paid out of fees collected by the attending physician or out of fees collected under any type of medical-surgical insurance coverage. It is further recommended that any future proposal pertaining to this matter be thoroughly studied by the law department and judicial council before submission to the House. In view of the above your reference committee recommends that Resolution Nos. 9, 12, 17, 20 and 49 have no action taken upon them."

Even though the Missouri delegation resolution No. 17 was not specifically acted upon, the results of the action of the House of Delegates covered the intent of the resolution.

William A. Knight Jr., Chairman,
Ralph Perry,
Joseph C. Peden Jr.,
Vernon E. Wilson,
Kenneth Glover,
Willard Bartlett.

The Speaker referred this report to the Reference Committee on Medical Education and Public Welfare.

The report of the Committee on Aging, Stanley S. Peterson, M.D., Springfield, Chairman, follows:

REPORT OF THE COMMITTEE ON AGING

The Committee desires to bring to the attention of the membership the results of the efforts of the Association to further implement the Kerr-Mills law in Missouri.

The Missouri State Medical Association favored and worked for the passage of this legislation. It was the result of an intensive year and a half long study of the problem by 10 state legislators, the Cason Committee, and presented a program tailor-made to the needs of Missouri's elderly.

The first of the two programs, Senate Bill No. 140, which has been signed into law by the Governor, provides increased aid for health and hospital expenses for persons receiving Old Age Assistance. The second bill, Senate Bill No. 148, while passed by both houses of the General Assembly, was vetoed by the Governor after the close of the session. It would have established a program of health care assistance for the "near-needy" aged—persons who are not eligible for OAA, who have adequate financial resources for normal expenses, but whose income and resources are insufficient to meet the costs of serious or prolonged illness. According to published reports, the Governor's veto was based principally on the uncertainty of the cost of the program rather than its desirability or expense. He was quoted as saying, "I feel that in the future if it is possible to get accurate information as to how much such a program will cost, then it should be given consideration."

Under the terms of House Bill No. 140, recipients of public assistance are now provided benefits for inpatient hospital care for serious illness or injury for which outpatient care will not suffice; the condition need not be, as formerly, a "medical emergency" or an "acute serious illness." Monthly payments to those requiring care in a nursing home have been raised to a maximum of $80, and payments to completely bedfast and totally disabled welfare recipients have been raised to a maximum of $110 a month. For the first time, Missouri will provide benefits for dental expenses, drugs and medicines—the dental care to be authorized by the Division of Welfare and provided by a licensed dentist, and drugs and medicine also to be authorized by the Division of Welfare and prescribed by a licensed physician, osteopath or dentist. The legislature authorized $4,322,320 in state funds to implement this program for the 1963-1965 biennium. Under Kerr-Mills provisions, this will be matched, it is understood, by about $6,000,000 in federal funds.

Under the provisions of the proposed program for the near-needy, S.B. 148, aid would have been provided for inpatient hospital care for serious illness or injury, as well as for drugs prescribed by the attending physician for a period of up to 30 days after the patient's release from a hospital.

The Chairman of the Committee and Avery Rowlette, M.D., of Moberly have served on the Advisory Committee of the Director of Welfare. The Division of Welfare is charged with the responsibility of implementing the Kerr-Mills act. It is too early to forecast the outcome of the changes in the Missouri program because the law took effect on October 13, 1963.

Some dissatisfaction has been expressed by physicians regarding the new drug program. This program was begun on a minimal basis in order to determine costs. Improvements are to be made as time goes on. A meeting of the Advisory Committee is to be held on January 16 at which time a full consideration of the drug program will be the only agenda item.

A full report of changes will be made following that meeting in a supplemental report of this Committee.

The chairman of the Committee has served as MSMA representative to the Missouri Chapter of the National Rehabilitation Association and represented Missouri at the National Joint Council to Improve Care of the Aged in San Francisco in 1963. Because of his position as chairman, he was asked to address the Missouri State Nurses' Association and the Missouri Public Health Association, and to moderate a panel for the Vocational Rehabilitation Association.

It is the Committee's thought that all such opportunities to share the doctors' view with other organizations, especially those which may have been neglected in the past, is well worth the trouble and should be encouraged at all levels.

Stanley S. Peterson, Chairman,
Ralph Perry,
C. Thorpe Ray,
R. O. Muether,
Rolla B. Wray,
Robert C. Kingsland,
Robert H. Tanner,
Don H. Giesler,
John A. Griffith,
John W. Daake,
J. H. Summers.

The Speaker referred this report to the Reference Committee on Miscellaneous Affairs.

The report of the Committee on Public Service, O. B. Barger, M.D., Harrisonville, Chairman, follows:

REPORT OF THE COMMITTEE ON PUBLIC SERVICE

The Public Service Committee has reported at length to the Council on its meetings and activities throughout the year and the text of its report will be found in the minutes of the December 7-8, 1963 meeting of the Council.

As has been the custom of the Committee for the last several years, included here, however, is a résumé of the expenditures incurred by the Committee in carrying forward its objectives this year. Although not strictly chargeable entirely to the activities of this Committee, since additional work is done for other committees and in other phases of the program of the Association, all fees paid to the Public Relations Counsel of the Association are included in this accounting. Total expenditures for 1963 were $16,980.01.

O. B. Barger, Chairman
Kenneth C. Hollweg,
Armand Brodeur,
Fred L. Wommack,
Leonard T. Furlow.

The Speaker referred this report to the Reference Committee on Miscellaneous Affairs.

The following supplemental report of the Committee on Laboratory Medicine was presented in the following resolution by Charles B. Wheeler, M.D., Kansas City.

SUPPLEMENTAL REPORT OF THE COMMITTEE ON LABORATORY MEDICINE

Whereas, The American Medical Association has established and repeatedly reaffirmed the principle that, as the practice of pathology constitutes the practice of Medicine, benefits for these services should be included in medical insurance contracts, and should not be included in hospitalization insurance contracts and

Whereas, The House of Delegates of the American Medical Association in session November, 1960, passed Resolution No. 27 which in its last paragraph states, "Resolved, That the American Medical Association urge all constitutent associations to take such action as may be deemed necessary to effect the transfer of professional services from Blue Cross Plans and all other hospitalization plans into Blue Shield or that section of insurance plans providing for professional services, wherever such situations exist," and

Whereas, The House of Delegates of the Missouri State Medical Association has previously protested the inclusion of these medical services in Blue Cross contracts and recommended their coverage under Blue Shield contracts and

Whereas, It is the understanding that Group Hospital Service, Inc. (Blue Cross) and a committee of its member hospitals are negotiating a contract which involves the medical services of pathology, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association reaffirm its opposition to any contract between Blue Cross and its member hospitals which would involve the practice of pathology or any other branch of the practice of medicine as performed in a hospital, and be it further

Resolved, That a copy of this resolution be forwarded to Group Hospital Service, Inc., the Hospital Association of Greater St. Louis, Missouri Medical Service, Inc. and the Missouri Hospital Association.

The Speaker referred this resolution to the Reference Committee on Medical Education and Public Welfare.

The following supplemental report of the Committee on Cancer was presented by Charles E. Lockhart, M.D., Springfield, Chairman.

SUPPLEMENTAL REPORT OF THE COMMITTEE ON CANCER

Results of the poll by mail of the full Committee on Cancer indicate approval of (a) Cancer Registry, and (b) resolution on cigarette smoking.

The Speaker referred this supplemental report to the Reference Committee on Resolutions.

The report of the special Committee on Redistricting, J. H. Summers, M.D., Lebanon, Chairman, follows:

REPORT OF THE SPECIAL COMMITTEE ON REDISTRICTING

A special Committee on Redistricting was again appointed this year, in accordance with a recommendation approved by the 1963 House of Delegates which read:

"The (reference) committee does recommend to the House of Delegates that all local societies be polled during the coming year to determine their wishes with regard to hyphenation, changes in hyphenation affiliations and changes in Councilor Districts. We further recommend that another special Committee on Redistricting be appointed to study the results of such a poll and to make such recommendations as seem warranted to the 1964 House of Delegates."

The poll was duly carried out and the committee met in St. Louis on October 24, 1963. The report of that meeting follows:

The Special Committee on Redistricting met at the Chase Hotel, St. Louis, on October 24, 1963, with J. H. Summers, M.D., Lebanon, presiding. Those present were: Drs. Summers, Lebanon, Chairman; Ben M. Bull, Ironton; Chester L. Clark, Trenton; Ralph Perry, Kansas City; David N. Kerr, St. Louis (for Don C. Weir); Paul R. Whitener, St. Louis County (for Oscar P. Hampton Jr.) and Messrs. Tom R. O'Brien, Jordan Singleton and Tom Fox, St. Louis.

SURVEY OF COMPONENT SOCIETIES

The Committee reviewed the letter sent to all component societies in April, 1963, with accompanying questionnaire, and the follow-up letter sent to the societies in May. The April letter said, in part:

"The committee, following the directive of the House, would like to bring the question of changes in and within Councilor Districts directly to the component medical societies. We very much need an indication from your society as to whether it desires any changes in its status, or whether it prefers things to remain as they are.

"The question of Councilor District changes has been a recurring one for several years and we hope to have as much counsel and assistance as possible from the county societies themselves in preparing a report for next year's House of Delegates."

The accompanying questionnaire outlined all possible alterations that might be made in a society's Councilor District status and asked that any specific changes desired by the society be indicated.

The May letter, sent to all societies that had not replied at that time, again asked for an indication of the desires of the society and emphasized that the committee would appreciate an answer from the society even if no change were requested.

SURVEY RESULTS

The questionnaire was sent to 51 component societies, representing the 114 counties of Missouri and the City of St. Louis.

Replies were received from 25 societies, covering 62 counties. (This is a return from 49 per cent of the societies, 55 per cent of the counties.) The societies that replied represent 3,246 members, those not replying represent 636 members.

Twenty-four of the 25 responding societies approved the present status of the Councilor Districts and indicated no desire for a change.

One society—St. Louis County Medical Society—desired a change in the Fourth Councilor District. In replying to the committee's inquiry, the society wrote that it ". . . is of the opinion that it should have a Councilor District of its own, due to its size and rapid growth over the past 15 years."

Two hyphenated societies suggested changes within their own structures which would not affect the Councilor Districts involved.

CHANGES IN HYPHENATED SOCIETIES

In relation to the two hyphenated societies requesting changes, it was brought out that the Mineral Area Society sought to have Ste. Genevieve County (one member) transferred to hyphenation with the Perry County Medical Society (10 members) because of a greater community of interest between the latter two counties. In addition, Nodaway-Holt-Atchison-Gentry-Worth Counties Medical Society sought to change its name to the Northwest Missouri Medical Society.

The scientific session opened with a panel on "What's New."

Since these desired changes do not affect the Councilor Districts as such, they are not within the purview of the committee, but are under the jurisdiction of the Council. These two requests were therefore referred to the Council.

HOUSE OF DELEGATES REPRESENTATION

Similarly, requests for changes in representation in the House of Delegates brought up by the St. Louis City and St. Louis County Medical societies were considered beyond the scope of the committee as it was constituted by the resolution of the House.

FOURTH COUNCILOR DISTRICT

In discussion, it was noted that the St. Louis County Medical Society now has 444 members, and is third in size in the state after St. Louis City (1,290 members) and Jackson County (840 members).

Of the other three societies in the Fourth District, two—Franklin-Gasconade-Warren and Jefferson Counties did not reply to the committee's inquiries. The third—Lincoln-St. Charles—replied that it was satisfied with the present status.

RECOMMENDATIONS

Several members of the committee reviewed the history of society representation in the Fourth District and the growth of the St. Louis County Society. After thorough discussion, particularly of the status of the St. Louis County Medical Society and the Fourth Councilor District, the committee concluded:

1. On the basis of the replies to the questionnaire submitted to the component societies of the Association, the committee could find little active desire for change in present Councilor Districts.

2. The committee therefore is of the opinion, basically, that no change is needed in Councilor Districts at present. If such change is to be considered, however, the committee would make the following recommendations:

(a) The number of Councilor Districts remain at ten. (This recommendation is strongly emphasized.)

(b) The St. Louis County Medical Society be constituted the Fourth Councilor District by itself.

(c) The remaining six counties in the present Fourth Councilor District be transferred into adjacent Councilor Districts as mutually acceptable to the new Councilor District and the members in the individual county being transferred.

3. The suggestion as to possible transfer of these six Fourth Councilor District counties to adjacent districts be explored by the MSMA staff with the members, societies and Councilors involved for further report to the House of Delegates.

In the matter of transfer of Ste. Genevieve County from the Mineral Area Society to hyphenation with the Perry County Medical Society, this change was approved by the Council at its meeting of December 7-8, as noted in the minutes of that meeting.

The change in name of the Nodaway-Holt-Atchison-Gentry-Worth Counties Medical Society was approved by the Council at its February 2 meeting, and the official name of that society is now the Northwest Missouri Medical Society.

Investigations by the MSMA staff in regard to transfer of the various counties in the Fourth Councilor District to adjacent districts as mentioned in the preceding report was being completed at time of publication of this material.

J. H. Summers, Chairman,
Ben M. Bull,
Chester L. Clark,
Ralph Perry,
Oscar P. Hampton Jr.,
Don C. Weir.

The Speaker referred this report to the Reference Committee on Constitution and By-Laws.

The following report of the Missouri State Medical Foundation, appearing in the Handbook, was referred to the Reference Committee on Medical Education and Public Welfare:

MISSOURI STATE MEDICAL FOUNDATION

The Annual Meeting of the Missouri State Medical Foundation will be held immediately following the Monday session of the House of Delegates of the Missouri State Medical Association on March 8, 1964. All members of MSMA in good standing—who are thereby members of MSMF—are invited to attend the meeting of the Foundation.

Principal business of the meeting will be to receive a report of the Foundation's activities for the preceding year and the election of one trustee for a five year term on the Foundation's six member Board of Trustees. Dr. Leonard T. Furlow, St. Louis, incoming President of the Missouri State Medical Association becomes an ex-officio member of the Board.

A meeting of the Board will convene following the Foundation's Annual Meeting for the purpose of electing the President, Vice President and Secretary-Treasurer for 1964-65. Terms of officers are for one year.

FEBRUARY 1, 1963 TO FEBRUARY 1, 1964

*Income**

Contributions

1963 Assessments MSMA Membership	$24,211.56
Special Grant—Edward Mallinckrodt 2/6/63	5,000.00
Special Grant—C. V. Mosby Company 11/7/63	250.00
Additional Special Contribution from Miss Nellie Evans in memory of her father, Dr. A. L. Evans (Total Now—$3,500)	1,000.00
Donations from Doctor Members	3,775.00
Individual Gifts—non-medical donors	275.00
Donations from County Medical Societies	1,100.00
Tribute Donations, memorials, etc.	257.50
Total Contributions	$35,869.06
Interest on Loans made to Students	121.06
Total Income	$35,990.12

* Figures do not include income from 1964 MSMA assessment.

Loans

Loans Granted to Students (77)	35,550.00
Repayments on Loans	1,160.00

Loan Recapitulation

Total Operations September, 1960 to February 1, 1964

Income to Date (including interest)		$119,509.19
Loans Made to Students to Date	120,070.00	
(Less) Loan Repayments	1,660.00	
Loans Outstanding	118,410.00	118,410.00
Balance on Hand		$ 1,099.19

Total number of loans granted		257
Number of different students receiving loans		103
Students receiving more than one loan	78	
Students receiving one loan	25	

Medical School	*Number of Students Granted Loans*
Missouri University	80
St. Louis University	16
Washington University	2
Tulane University	1
Albert Einstein University	1
Meharry University	2
Baylor University	1
	103

The report of the Council, Byron M. Stuart, M.D., Boonville, Chairman, follows:

THE COUNCIL

Meeting of May 25, 26, 1963

The Council met at Chase Hotel, St. Louis, May 25, 26, 1963, with Byron M. Stuart, M.D., Boonville, Chairman, presiding. Those present were Drs. Stuart, Joseph L. Fisher, St. Joseph; James M. Macnish, St. Louis; Paul R. Whitener, St. Louis; O. B. Barger, Harrisonville; Hector W. Benoit Jr., Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell, Kenneth C. Hollweg, Kansas City; Leonard T. Furlow, St. Louis; John I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; Vernon E. Wilson, Columbia; H. M. Hardwicke, Jefferson City; A. W. Neilson, St. Louis; B. J. Bass, Salem; William D. Mayer, Columbia; Messrs. Arne Larson, Chicago; George Curry, Lebanon; Hollister Smith, Edgar Mothershead, St. Louis; William H. Bartleson, Fred Mowry, Kansas City; Gary Schnedler, Springfield; Lemoine Skinner, Jordan Singleton, Vincent Sanders, Ray McIntyre, Tom P. Fox, T. R. O'Brien, and Miss Peggy Heilig, St. Louis.

SECRETARY'S REPORT

Mr. O'Brien reported a letter of thanks received from the Student AMA for the contribution and charter membership.

He also reported that a letter was received from the Medicare office in Washington, D. C., notifying that Major General James H. Forsee had been appointed Executive Director of the Medicare program. General Forsee is a graduate of Missouri and Washington University Schools of Medicine.

Mr. O'Brien reported that the annual checks from AMA-ERF were received and were distributed to the three deans at a luncheon at which Dr. Furlow presided. The University of Missouri School of Medicine received $8,983.50; Washington University School of Medicine received $19,300.99; and St. Louis University School of Medicine received $20,806.49.

INTRAVENOUS THERAPY

The following ruling from the Attorney General's office in regard to intravenous therapy was received from the Missouri State Board of Nursing, with a request that it be published in Missouri Medicine:

“Recently the Missouri Board of Nursing received the following information from Attorney General Thomas Eagleton regarding question as to whether registered professional nurses or practical nurses may administer fluids intravenously. Members of the Board of Nursing recommended that, if possible, this information be included in the publication of your association so that it will be available to hospital administrators, physicians, nurses and others interested in the functions of the registered professional nurse and licensed practical nurse.

“We have carefully considered this question and it is our opinion that a registered professional nurse who is qualified by experience or training is legally authorized to administer fluids such as glucose, saline solutions, vitamins, Ringer's solution, distilled water, amino acids and antibiotics intravenously by needle puncture when this is done under the direction or supervision of a licensed physician.

“Performance of this procedure under the supervision and direction of the physician does not necessarily require the immediate physical presence of the physician. It is our opinion that the registered professional nurse if performing this procedure under the supervision and direction of the physician if it is performed pursuant to and in accordance with a proper order for this treatment and if the physician is available to receive or dispense information concerning the initiation and continuation of the procedure. It is further our opinion that practical nurses are not authorized by law to administer fluids intravenously.”

Dr. Stuart reported for the Council to the House of Delegates.

The Council approved this request.

LEGISLATION

Mr. O'Brien presented a report on the current status of pending State legislation.

MSMF

Dr. Furlow gave a report on the financial standing of the Foundation and stated that $21,374.97 was due the Foundation to date from the $7.50 assessment of the MSMA membership. This would bring the balance on hand to approximately $26,000. It was explained that this would not take care of the number of applications anticipated for the fall term. He reported that Dr. Benoit was elected to a five year term on the Board of Trustees at the annual meeting in Kansas City.

Mr. Skinner proposed that a meeting be arranged to invite the three deans of the medical schools, as well as a number of people responsible for foundations, in the hope that funds might be solicited for the Foundation, this meeting to be in the form of an evening get-together at some nice place. After discussion, it was decided to take no action on this proposal for the time being.

A check in the amount of $1,000 for the Foundation was presented to Dr. Furlow by Dr. Whitener from the St. Louis County Medical Society, and a check in the amount of $100 was received from Dr. English, Councilor from the 10th District. Dr. Stuart thanked both the St. Louis County Medical Society and Dr. English for their generous contributions.

MMPAC

Mr. O'Brien discussed the meeting of the Board of MMPAC at the time of the annual session and reported that Dr. Ralph Perry was reelected Chairman and Dr. James Sisk, Secretary-Treasurer. He also reported that several members of the Board of MMPAC and himself attended the AMA Legislative Conference in Chicago on May 18, 19.

AMA DEPARTMENT OF MEDICINE AND RELIGION

Mr. Arne Larson, Assistant Director, AMA Department of Medicine and Religion explained that this department was fairly new. About one and one half years ago the AMA established it to bring together physicians and clergymen of all faiths to discuss the areas of need in their local communities in which the two professions working together may be of service to one another and to the patient and his family. The Rev. Dr. Paul B. McCleave, a Presbyterian clergyman, serves as department director. He stated that pilot programs were conducted in the fall of 1962 and on the basis of these program results, the department is prepared to present program ideas and suggestions through the state associations that will promote a liaison between physicians and clergymen at the local level. It was suggested that committees be appointed by the county societies to implement this kind of program in each county in the state.

On motion of Dr. Furlow, duly seconded, it was decided to appoint a committee of the medical profession only, at the state level, to proceed along the lines outlined above.

FIELD SECRETARY'S REPORT

Mr. McIntyre called attention to a number of meetings which had been held recently, in particular, the Medical Quackery Conference held in Jefferson City on May 1. He also attended the installation meeting of the Jasper County Medical Society in Joplin where 60 people were in attendance; an evening dinner meeting at the Whiteman Air Force Base to which area physicians and wives were invited with a total attendance of 176. On May 16, he attended a luncheon at the University of Missouri for the junior medical class which was jointly sponsored by the Missouri Academy of General Practice and MSMA. Fifty-five junior medical students attended the luncheon. He attended a meeting of the Board of Trustees of MAGP on May 16, also, in Columbia. On May 24, he attended a Regional meeting of State Medical Association Executives at the Kentucky State Medical Society in Louisville.

UNIVERSITY OF MISSOURI APPROPRIATION REQUEST

Dr. Wilson reported that the appropriation request for the University of Missouri, in Senate Appropriations Committee, will probably come on the floor the early part of this week. The appropriation is short $379,000 for the biennium. Dr. Stuart urged everyone to contact his State Senator as soon as possible for help in this matter.

1964 ANNUAL SESSION PROGRAM

Dr. Matthews presented the report of the Committee on Scientific and Postgraduate Work which contained a tentative outline of the scientific program for the 1964 session.

After considerable discussion relative to various changes in the program, it was decided that these could be worked out by the Program Committee at a later meeting. On motion of Dr. Barger, duly seconded, it was agreed that the scientific program be deleted from the Wednesday agenda and that the Program Chairman make such changes he deems necessary at a later date.

Dr. Matthews then gave a résumé of the results of the questionnaire which was sent to the entire membership following the 1963 annual session. The total mailing was 3,850, of which 1,009 were returned by the cut-off date of May 20. This is a 26.2 per cent return. For those attending, 193 questionnaires were returned, for a 37.5 per cent response. For those not attending, 816 were returned, a 24.5 per cent response. More specialists than GP's attended from St. Louis, Kansas City and the outstate cities, with only the towns showing a predominance of GP's. The largest number of respondents stayed at the session for the entire four days. The next group, 28.6 per cent, stayed for three days, while 21.4 per cent attended for two days. The majority of respondents who made additional comments indicated that this was a successful, enjoyable program. In conclusion, in both the "attendance" and "content" areas, the result of this year's questionnaire are similar to the one of 1960. The profiles of the members attending both sessions would be almost the same. Little specific criticism was expressed, although the opportunity was certainly available.

OPERATION HOMETOWN

The AMA film, "Operation Hometown," was shown to the Council. The film, with President-elect Edward Annis as narrator, explains the program of the AMA to defeat H.R. 3920, the King-Anderson bill.

TREASURER'S REPORT

Dr. Doyle presented the Treasurer's report as of April 30, 1963, calling special attention to the loss of revenue due to the drop in advertising in MISSOURI MEDICINE. He stated that the income from advertising was far below estimated receipts for this time of year, and unless it picked up within the next few months, MSMA would be operating on a tight budget. On motion of Dr. Doyle, the report was accepted.

AMA RESOLUTIONS

Dr. Neilson read the following three resolutions to be presented to the AMA House of Delegates at its meeting in June, by the Missouri Delegation:

Intern Training Program Requirements

WHEREAS, The House of Delegates of the American Medical Association at the 1962 Clinical Session recommended to the Council on Medical Education and Hospitals that it give serious consideration to the disapproval of any hospital's intern training program if, for two successive years, less than 25 per cent of that hospital's total house staff were graduates of accredited United States or Canadian medicals schools, and

WHEREAS, Enforcement of such a rule would jeopardize the medical care in those non-affiliated hospitals which have good educational programs but have, for one reason or another, been unsuccessful in attracting a full quota of U. S. or Canadian medical school graduates, and

Whereas, The needs of the Federal government result in the continual withdrawing of house staff members who are graduates of U. S. schools, and

Whereas, It is the opinion of many members of the AMA House of Delegates, along with many AMA member physicians, that a hospital's training program should be judged on its merits, and not on the country of origin of the members of its house staff; therefore, be it

Resolved, That the House of Delegates of the American Medical Association rescind the cited recommendation to the Council on Medical Education and Hospitals.

Compensation of Interns and Residents

Whereas, Special and Supplementary Reports on Compensation of Interns and Residents were submitted by the Councils on Medical Education and Hospitals and on Medical Service at the November, 1962 Clinical Session of the House of Delegates of the American Medical Association for interim study by the House, and

Whereas, Since the true purpose of intern and resident training programs is to provide those in training with educational opportunities, experience and high standards of medical ethics in order to enable them to become competent and responsible physicians, and

Whereas, The medical profession should therefore reject a basic principle considered in the report as fundamental in determining compensation for interns and residents—namely, that a graduate physician serving as an intern or resident should receive financial support commensurate with his professional responsibilities, with due recognition of his educational opportunities, and

Whereas, While the right and need of house officers to receive a living wage is recognized, interns and residents are primarily engaged in an educational experience and their work is not to be considered either as that of a practicing physician or as a source of financing for the training programs or other activities, and

Whereas, The problem of compensation for interns and residents has been, is, and should remain the function of the individual hospital concerned, therefore be it

Resolved, That the House of Delegates of the American Medical Association rejects the principle of the report's suggested formula for compensating interns and residents from funds provided by the hospital, attending staff and patients in proportion to the benefits received by each from the services of the house staff, and, be it further

Resolved, That the House of Delegates opposes any attempt to implement the special and supplementary reports on compensation of interns and residents published in the *Journal of the American Medical Association* of October 27, 1962, page 459, et sequitur.

"Lifetime Learning for Physicians" Program

Whereas, One of the primary functions of the American Medical Association is to promote medical education and elevate educational standards in the United States, including postgraduate medical education, and

Whereas, The House of Delegates of the American Medical Association, at its November, 1962 Clinical Session, approved an informational report on a document titled, "Lifetime Learning for Physicians," also known as the Dryar Report, for use as a guide for a national program of continuing postgraduate medical education, and

Whereas, Careful study of this report shows that it places undue emphasis on certain means of communication in education, particularly electronic communications, and pays only passing tribute to the many important methods of postgraduate education now planned, developed and implemented through the efforts of various clinical societies, national and sectional specialty groups, the American Academy of General Practice and state and local medical societies, which provide physicians with varied and continuing educational programs, and

Whereas, Such medical organizations as these should be encouraged and urged to continue their efforts in postgraduate education; therefore, be it

Resolved, That the November 1962 action of the AMA House of Delegates in approving the document "Lifetime Learning for Physicians" as a guide for a national program of continuing postgraduate medical education be rescinded, and, be it further

Resolved, That the Dryar Report, "Lifetime Learning for Physicians" be referred to a reference committee for further study and determination of its logical use in planning postgraduate medical education, taking into full account present facilities, efforts and programs existing in American medicine today.

These resolutions were adopted by the House of Delegates of MSMA. After considerable discussion, the resolutions were approved for submission to the AMA House of Delegates.

COMMITTEE ON RURAL HEALTH

Dr. Bass presented the following report of the Committee on Rural Health:

A meeting of the Rural Health Committee of the Missouri State Medical Association was held on February 10, 1963, in the Missouri Hotel in Jefferson City.

The Committee reviewed its written report for the House of Delegates of the Missouri Medical Association and felt that essential and pertinent details and functions of the Committee were included therein.

The Missouri University Preceptorship Program was discussed at length by the Committee, and the Assistant to the Dean, Dr. Mayer, was advised that the program is well received throughout the state. He was urged to encourage expansion of the Preceptorship Program to include, if at all possible, a majority of the senior medical students.

Mr. McIntyre gave a breakdown of the number of Missouri University graduates locating in Missouri. The Committee received this report with pleasure, and noted that Missouri's best probable source of future physicians appears to be from the Missouri University graduates. Mr. McIntyre also discussed the physician placement activities of the Missouri State Medical Association's office, and gave a list of a number of physicians who had located in the state during the last year.

The Committee discussed in some detail, the medical school and its relationship to the medical community. It was felt that aside from its primary purpose of educating medical students, that the medical school had a further obligation to the medical community, by providing assistance to the latter in its constant effort to upgrade its skills and knowledge. Note was taken of the programs and seminars that are offered throughout the year for this purpose. The Committee expressed its support and approval of these; however, a need for more formal and prolonged periods of study was expressed. The Committee realizes that plans of this sort present many problems, not the least of which might be the temporary replacement of the local physician. The Committee hopes that further consideration of the problem may be forthcoming at all levels of the Missouri State Medical Association.

The current status of mental health treatment in the state was discussed along with present plans for the upgrading and expansion of mental health facilities in the state, as proposed in particular by Dr. Ulett and his group. The Committee expressed its approval and support for this program, and the individual members were encouraged to contact their legislators in order that the necessary funds might be forthcoming to implement this program.

The Student Loan Program of the Missouri State Medical Foundation was discussed, and the Committee noted with pleasure that 81 students have already received loans from the Foundation. Balance sheet as of January 31, 1963, revealed only $142.00 remaining in the treasury for loans. Dr. Mayer explained to the Committee that there is urgent need for considerable amounts of additional funds to assist worthy medical students who are in financial need. The Committee endorsed and strongly supports further assistance to the Missouri State Medical Foundation program for this purpose. The committee also discussed further need of funds to finance medical education of Missouri students.

in virtually all diarrheas...prompt symptomatic control

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TABLETS / LIQUID—Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . 2.5 mg.
(Warning: May be habit forming)
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Gastroenteritis **Functional diarrhea** **Drug-induced diarrhea** **Postsurgical diarrhea**

Lomotil controls the basic physiologic dysfunction in diarrhea—excessive propulsive motility. Pharmacologic evidence indicates that it does so by directly inhibiting propulsive movements of the intestines. This direct, well-localized activity controls diarrheas of widely varied origin and does so promptly, conveniently and economically.

The relatively few conditions in which Lomotil has given less than satisfactory control have been, for the most part, those such as severe ulcerative colitis in which too little anatomic or functional capacity of the intestines remains for the motility-lowering action of Lomotil to have effect.

It should be noted, however, that Lomotil has proved highly useful in mild to moderate ulcerative colitis and in several other refractory forms of diarrhea.

The recommended initial adult dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. *Children's* daily dosage (in divided doses) varies from 3 mg. for a child of 3 to 6 months to 10 mg. for one 8 to 12 years of age. Lomotil is an exempt narcotic; its abuse liability is low and comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Research in the Service of Medicine SEARLE

Dr. B. J. Bass presented to the Committee an additional program designed to raise funds to support medical education of Missouri residents until such time as the Missouri State Medical Foundation becomes able to meet current and future requests. This plan would be based essentially on private finance and should enable considerable amounts of money to be available to medical students at a cost not greater than 3 per cent per annum. This plan is an outgrowth of instructions by the Medical Advisory Committee of Missouri University Medical School, to see if further funds could be raised for this purpose. This plan in no way interferes or competes with the Missouri State Medical Foundation program. The Committee members discussed it at length, and in general were favorably disposed to it. The plan is to be presented in detail at a later date to the Council of Missouri State Medical Association.

The Committee also discussed the desirability of having closer liaison between the Rural Health Committee of the Missouri State Medical Association and the Missouri Public Health Service. A letter from Dr. Hardwicke, Director of the Division of Public Health of Missouri, to Dr. Bass, Chairman of the Missouri Rural Health Committee, points out the desirability of closer liaison between the two groups for future cooperation. It was felt that possibly a medical representative of the Division of Public Health in the State of Missouri might well serve as one member of the Rural Health Committee in the State of Missouri.

The Committee encouraged its members to attend the session of the Missouri State Medical Association scheduled for March 24-27, at Kansas City, and adjourned.

After discussion, and on motion of Dr. Hollweg, duly seconded, the report was accepted.

SUPPLEMENTARY LOAN PROGRAM FOR MEDICAL EDUCATION

Dr. Bass presented a proposed supplementary loan program for Missouri residents at the University of Missouri School of Medicine which would include not only the students who need additional funds, but also interns and residents who are in financial need. This is a private enterprise venture which was arranged by Dr. Bass and others with the cooperation of Mr. George Curry, President of the Bank at Lebanon. Loans would be available to medical students, interns and residents at 3 per cent, payable three years after graduation. This is not intended to conflict with our Foundation, but will help when funds are depleted. The plan provides for a governing body composed of possibly the President of MSMA; President of MAGP; Dean of the Medical School (Mo.); representatives of the legal profession and Farm Bureau.

After considerable discussion, and on motion of Dr. Furlow, duly seconded, it was agreed to approve this plan in principle, subject to further study by a special committee to be appointed by the Chairman of the Council.

Dr. Bass and Mr. Curry were thanked for their efforts in this behalf. Dr. Stuart appointed the following committee to study this proposal: Drs. Fisher, Bass and Doyle.

ELLIS FISCHEL STATE HOSPITAL

Dr. Hardwicke reported that the Ellis Fischel State Cancer Hospital had received a research grant on cancer which would require building of new facilities. This is purely a research project and a nonprofit foundation will be formed. It is estimated that three million dollars will be required to erect the building and it is proposed that this be obtained through a campaign for contributions.

STATE LINE TRAINING COURSE

Dr. Hardwicke reported that he attended and served on the faculty of the three day State Line Training Course in Springfield, May 23, 24 and 25. He stated that 351 persons were registered and that the program was a success, and that Dr. Siegel, Chairman of the MSMA Committee on Civil Defense Disaster Medical Care, expressed his appreciation for MSMA contribution to the program.

REPORTS OF COUNCILORS BY DISTRICTS

Dr. Macnish gave a brief report on the massive polio immunization plan in St. Louis and St. Louis County. He also extended an invitation to attend the Athletic Injury meeting at the St. Louis Medical Society on Sunday, August 18, which will be open to the public. He also reported the Woman's Auxiliary is looking forward to entertaining at the state meeting next spring, for the Sunday night affair.

The Council met prior to the meeting of the House of Delegates.

Dr. Benoit reported that the Jackson County Legislative Committee is anxious to get started on "Operation Hometown" program. He also reported that the Jackson County Medical Society has approved the measles immunization program in cooperation with the Philips Roxane Company, June 1-2.

Dr. McCraw stated that the Southwest Missouri Cancer Conference at the Holliday Inn, near Table Rock, was a good meeting.

Dr. English reported that Mr. Frank Woolley of the AMA spoke at the Pemiscot County Medical Society meeting on May 16.

REDISTRICTING COMMITTEE

Mr. O'Brien stated that a letter was sent to all county societies which included a questionnaire to be filled out and returned to the state office. There was a fair response up to this time, but a second letter would have to be sent. He reported that the committee would meet later on to review the results of the questionnaire.

BRANCH OFFICE IN JEFFERSON CITY

Dr. Stuart brought up the subject of a branch office in Jefferson City. The Council was instructed to study the situation and report back to the House of Delegates in 1964. It was suggested that Dr. Matthews contact the Cole County Medical Society to appoint a committee of the Cole County Society to meet with the Council at its next meeting.

NEXT MEETING

The dates of September 21, 22, were agreed upon for the next Council meeting.

Meeting of September 21, 22, 1963

The Council met at Hotel Chase-Park Plaza, St. Louis, September 21, 22, 1963, with Byron M. Stuart, M.D., Boonville, Chairman, presiding. Those present were Drs. Stuart; Joseph L. Fisher, St. Joseph; James M. Macnish, St. Louis; Paul R. Whitener, St. Louis; O. B. Barger, Harrisonville; H. W. Benoit Jr., Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Kenneth C. Hollweg, Kansas City; Leonard T. Furlow, St. Louis; Charles R. Doyle, St. Louis; John I. Matthews, Jefferson City; Vernon E. Wilson, Columbia; H. M. Hardwicke, Jefferson City; Joseph V. Finnegan, St. Louis; Stanley S. Peterson, Springfield; H. E. Petersen, St. Joseph; William D. Perry, St. Louis; B. J. Bass, Salem; Messrs. Frank Woolley, AMA, Chicago; Gary Schnedler, Springfield; Edgar Mothershead, Lemoine Skinner, Jordan Singleton, Hollister Smith, Thomas P. Fox, Ray McIntyre, T. R. O'Brien, and Misses Peggy Heilig and Helen Penn, St. Louis.

MISSOURI ASSOCIATION FOR MENTAL HEALTH

Mr. O'Brien read a letter from the Missouri Association for Mental Health requesting him to serve on the board of the organization. On motion of Dr. Hollweg, duly seconded, he was instructed to accept the appointment.

OFFICE LEASE

It was reported that the lease on office space of the Association would soon expire. On motion of Dr. Hollweg, duly seconded, it was voted to renew the lease for a three year period.

STUDENT AMA

Mr. O'Brien said that the Student AMA had asked if the Missouri State Medical Association would be willing to approach the membership for individual sustaining memberships in the Student AMA. After discussion, in which it was pointed out that MSMA is already a sustaining member of SAMA, it was voted on motion of Dr. Furlow, duly seconded, that either a news item or an advertisement without charge be placed in MISSOURI MEDICINE.

NATIONAL AMA AUXILIARY PRESIDENT-ELECT

A letter from Mrs. Crispell, president of the Woman's Auxiliary of the MSMA, asking that the Council endorse Mrs. Richard A. Sutter, St. Louis, as a candidate for president-elect of the AMA Auxiliary was read. On motion of Dr. McCraw, duly seconded, it was voted to give this endorsement.

REHABILITATION

A letter to Dr. Hollweg from the Congress of Physical Medicine and Rehabilitation urging that MSMA establish a section on Physical Medicine and Rehabilitation was read. In the discussion, it was pointed out that the Association does not have sections on any phase of medical practice. However, there is a standing Committee on Physical Medicine and Rehabilitation and that while at present the chairman is an orthopedist, and later a physician working in physical therapy might be named chairman. On motion of Dr. Furlow, duly seconded, Mr. O'Brien was asked to answer the letter to that effect.

OVERHEAD EXPENSE INSURANCE

Mr. O'Brien said that there had been inquiries concerning the MSMA having group overhead expense insurance and he was asked to check into the possibilities.

TREASURER'S REPORT

Dr. Doyle gave a financial report up to the present time and said that the Association was operating within its budget. The report was accepted.

FIELD SECRETARY REPORT

Mr. McIntyre reported on several meetings that had been held by societies during the summer months, two on athletic injuries at Poplar Bluff on August 11, and at St. Louis on August 18. He reported a meeting of the Northwest Chapter of MAGP on August 22; a statewide advisory committee meeting on rheumatic fever on September 4; the annual Greene County golf tournament on September 12. He said that the Missouri Health Council would hold a meeting on "Communications" on September 24; the Kansas City Southwest Clinical Conference will convene September 30, October 1 and 2; the AMA Conference on Physicians and Schools October 9 to 12; the Annual Assembly of the Missouri Academy of General Practice in Kansas City on October 26 and 27.

On motion of Dr. Hollweg, duly seconded, it was voted that Mr. McIntyre and Dr. Guy Magness, St. Louis, attend the Conference on Physicians and Schools, and that their expenses be paid by the Association.

MEDICARE

Mr. O'Brien reported that the Medicare contract expires on September 30. He said that since the contract started in December, 1956, there had been 21,331 cases handled in the Kansas City area with $1,599,577.00 paid to doctors, and in St. Louis 29,878 cases handled with $2,389,800.00 paid to doctors. It was agreed that the contract should be continued.

IMMUNIZATION

Dr. Hardwicke said that the government would make money available for the immunization of preschool children. He said that the Division of Health would not directly carry out such a program but would make the information available to physicians and would assist physicians, also making vaccine available when a doctor feels that a patient is unable to pay. He said that at a recent meeting in Washington, D. C., the new Federal Mental Retardation program was discussed and asked advice of the Council. It was decided that the Committee on Infant and Child Care be asked to study this and watch for trends.

DR. VOHS

Dr. Macnish presented the following resolution:

WHEREAS, The members of the Council of the Missouri State Medical Association, gathered in session in St. Louis this 21st day of September, 1963, are saddened by the loss of our beloved friend, Dr. Carl F. Vohs, and

WHEREAS, We are filled with pride and gratitude for the count-less contributions made by Dr. Vohs to the medical profession and his community during 46 years of practice, remembering his devoted service as President of the state Association, his pioneer efforts in founding both the St. Louis Blue Shield and Blue Cross plans, and his vital role in the battle against polio in the St. Louis area, therefore, be it

Resolved, That the Council expresses to Mrs. Vohs our own deepest sympathies and those of the entire membership of the Missouri State Medical Association.

On motion of Dr. Whitener, duly seconded, the resolution was adopted.

BULLETIN

Dr. Benoit discussed the possibility of a news bulletin going to the membership periodically, especially during a legislative session. The amount of material going to doctors through Missouri Medicine and releases directly to doctors were reviewed. It was suggested that an insert be used in Missouri Medicine that could be prepared nearer the time of mailing of the journal. After discussion, on motion of Dr. Furlow, seconded by Dr. Benoit, it was voted that a notice be published in Missouri Medicine that any member wishing to receive releases on legislative matters, should write the Association office to be placed on the mailing list.

Secretary Matthews spoke to the House of Delegates.

KERR-MILLS

Dr Stanley Peterson reported that there had been a meeting of the State Medical Advisory Committee to the Department of Welfare on the recently enacted legislation to broaden the scope of the Vendor act, or furthering the Kerr-Mills legislation.

He pointed out that the bill furnishes $3,200,000 for drugs, $800,000 for dental care and $9,471,000 for hospital care. He said that there were 15 drugs available under the rules. Dr. Peterson said that he would report further as work progressed.

COMMITTEE ON CONTROL OF VENEREAL DISEASE

The following report of the Committee on Control of Venereal Disease was presented:

The Committee on Control of Venereal Disease met at the Missouri Hotel, Jefferson City, on June 26, 1963. Members in attendance were Drs. E. M. Powell, Springfield; T. A. McMillan, Kansas City and E. A. Belden, Jefferson City. Others in attendance were Dr. Hardwicke, Dr. Meinershagen, Mr. Wilson Cocoran, Dr. Allen of the State Division of Health, and Mr. Raymond McIntyre of the State Medical Association staff.

The Committee met primarily to discuss means of presenting to the physicians of the State of Missouri the problem of the increasing rate of venereal disease. That this need exists was established by the figures from the State Health Department that the projected number of cases of primary syphilis would have increased by 25 per cent over 1962 and by 300 per cent over 1958. That a better understanding of the problem by the physicians in the State of Missouri is needed was explained in a survey co-sponsored by the American Medical Association, the American Osteopathic Association and the National Medical Association. The findings were that 162 physicians treated 309 cases of primary and secondary syphilis. Of these 309 cases, 19 cases were reported to the Health Department, or 6.1 per cent. This figure is not in keeping with the figures of our State Health Department and raises a question of (1) improper diagnosis, (2) reluctance to report cases of syphilis, which is contrary to our state law, or (3) poorly informed physicians, who do not know how to use the facilities available to them in the diagnosis and treatment of this disease.

During the discussion that followed the methods suggested of presenting this to the various societies made it apparent that this would have to vary with the individual areas or individual counties. In some areas this program could be presented to the county medical societies, in others it would of necessity have to be done through the hospital staffs. The one point of agreement was that a printed summary or reprint should be available to have as reference after any program. Dr. Neilson of St. Louis, with the cooperation of Dr. Belden, is in the process of completing such a paper for presentation to the State Journal for publication. These reprints would then be available for distribution at any such program. In Greene County a program is planned in October, which will attempt to show that the increasing rate of syphilis in teenagers is part of a broad social problem, involving juvenile delinquency and illegitimacy. It was felt that the members of the Committee from the different areas would have to spearhead methods of presenting this program to their respective areas, either by themselves or by interesting others to conduct such a program.

The time of future meetings would depend on the number of programs that we can get under way.

It was stated that the article for publication had been prepared and approved and would appear in an early issue of Missouri Medicine. Dr. Hardwicke said that the Division of Health would purchase 1,500 reprints of the article to be made available to physicians.

On motion of Dr. Hollweg, duly seconded, the report was approved.

LEGISLATION

Mr. O'Brien presented the following report on Missouri legislation affecting the practice of medicine:

Legislation Adopted—Kerr Mills Implementation. S. B. 140 amends Missouri's present Kerr-Mills program regarding the "needy" so that inpatient hospital care may be furnished to persons who are certified by competent medical authority as requiring hospitalization for serious illness or injury for which outpatient care will not suffice, provided, however, that such hospitalization shall not include those persons admitted to a hospital for elective surgery, diagnostic studies and chronic conditions. In addition, certain dental care and prescribed drugs and medicines may be provided.

The cost in state funds will be $4,322,320 for the biennium. The total cost, including Federal funds, will amount to about $10,000,000.

S. B. 148 provides that the Division of Welfare shall establish a Kerr-Mills program for the "near needy." The program shall consist of (1) inpatient hospital care for serious illness or injury for which outpatient care will not suffice; and (2) post-hospitalization, prescribed drugs or medicines for a period not to exceed thirty days after release from the hospital. This bill was vetoed by the Governor following passage by the legislature.

S. B. 142 provides that an Advisory Committee to the director of welfare regarding Kerr-Mills shall consist of 13 members, including the Chairman of the Senate Committee on Public Health and Welfare, Chairman of the House of Representatives Committee on Social Security, one member of the minority party from each committee, at least three physicians, and the others shall be persons interested in hospital administration, nursing home administration, nursing, dentistry and pharmacy.

Medical Examining Board—S. B. 109 adds a new section to the medical practice act, providing for the issuance of a temporary license for one year, without examination, to a person who is not a citizen of the United States but is legally authorized to practice under the laws of another state, territory or foreign country and who meets such other requirements as the board may prescibe.

S. B. 110 amends the medical practice act by increasing the original license fee from $25 to $50. The annual license renewal fees are increased from $2.50 to $10.00, beginning June 30, 1964. The Board may place a licensee on probation, as well as suspend or revoke a license.

Mental Health—S. B. 56 authorizes the establishment of Psychiatric Intensive Treatment Centers in St. Louis, Kansas City and Columbia. (Dr. Ulett's program.)

Professional Corporation Act—S. B. 108 provides that accountants, architects, attorneys, chiropodists, chiropractors, dentists, optometrists, doctors of medicine and osteopathy, and veterinarians may create a professional corporation. (The act is similar to those adopted in 19 states which were considered by the MSMA Committee on Corporate Practice.)

Legislation Not Adopted—H. B. 200 would have amended the chiropractic act. Chiropractic was to be defined as the science and art of examining and adjusting by hand all of the movable articulations of the human body, especially the spinal column, for the correction of abnormalities and deformities of the human body. X-ray for diagnostic purposes was to be added. (Under present statutes, a chiropractor may palpate or adjust by hand the movable articulations of the spinal column only.)

The chiropractic course was to be for four years rather than three and was to have included the following additional subjects: clinical diagnosis, x-ray and spinography, bacteriology and biochemistry. Passed House—Died in Senate Committee on Economics.

H. B. 47 would have provided that physicians who render emergency care at the scene of an accident would not be liable for any civil damages as a result of acts or omissions by such persons when no fee was charged for services rendered. Passed House—Died on Final Passage Calendar in Senate.

S. B. 264 would have amended statute on privileged communications by physicians. The bill would have provided that in such instances where a civil action had been commenced for bodily injuries or wrongful death a physician and surgeon's testimony would not be privileged in any action brought by the patient, his personal representative, his survivor, or the executor of his estate, wherein the patient's physical or mental condition was an issue. The bill was stricken from Senate "Perfection" Calendar.

H. B. 499 would have established a board to examine and license physical therapists. The legislation was similar to the bill which failed to pass in 1961 except that the board would have been separate from and not under supervision of the Healing Arts Board. Passed House—Died on Senate Final Passage Calendar.

Legislation and the following through that is needed was discussed. Dr. Matthews pointed out that to accomplish anything in the legislature, either to get a bill through or oppose one, took a great deal of ability, effort and time and complimented Mr. O'Brien on his work during the recent session. Dr. Matthews also pointed out that in another session, the complexion of the legislature may be different and that physicians themselves will have to do more about it. He suggested that there might be a meeting for presidents and secretaries of component societies at which programming, political action, and state and national legislation could be discussed. The political changes that may occur were discussed. Also political action committees were discussed and it was the consensus that a state plan was the best and Councilors were urged to get their members to contribute to MMPAC. Mr. Woolley discussed the work of AMPAC and discussed national legislation and how AMPAC had been used.

On motion of Dr. Furlow, seconded by Dr. Barger, it was voted that a meeting for presidents and secretaries of component societies be held and that the Chairman of the Council should appoint a committee to work out arrangements.

PROGRAM

Dr. Matthews gave an outline of the program for the 1964 Annual Session.

DEBATE KITS

Mr. O'Brien announced that debate kits for use of high school debating teams on the subject of medical care under social security were available from the MSMA office and that inquiries from students could be referred to the office.

M.U. REFERRALS

Dr. Wilson said that there still seemed to be difficulty in the referring of patients to the Medical Center in Columbia and asked advice about disseminating information on persons to contact. After discussion, on motion of Dr. Hollweg, duly seconded, it was voted to suggest that a listing of department heads be available and sent on request and also sent when referrals were acknowledged.

MSMF

Dr. Furlow gave the following report for the Missouri State Medical Foundation and pointed out that at least $9,000 would be needed at the beginning of the next semester in addition to the funds now available.

Status as of Sept. 20, 1963

Balance on Hand June 5, 1963	$ 6,206.99
Assessment Plus (one donation and one loan repayment)	22,970.24
	$ 29,177.23

Loans for First Semester (40 loans) 1963-1964	$ 19,000.00
Balance on Hand Sept. 20, 1963	$ 10,177.23
Total Loans to Date: (224 loans to 105 students)	$104,020.00

PRIVATE MEDICAL ENTERPRISE

Dr. Bass, reporting further on Private Medical Enterprise, said that incorporation papers had been drafted and read them to the Council. He said that the present address was Box 331, Salem, Mo. It was brought out that through this plan, money would be made available by a bank on the payment of interest by an individual. It was pointed out that any outright gifts to the organization should be turned over to the MSMF. Dr. Wilson said that publicity and mailings could be handled at the University.

On motion of Dr. Stricker, duly seconded, the organization was approved.

AMA

Dr. Hollweg discussed the AMA sessions and said that he thought the delegates needed more help than they had; that members and alternate delegates could be assigned to attend committee hearings for often one or two delegates are on reference committees and it was difficult for the others to get to all hearings. Dr. Petersen stressed that the policy of sending resolutions to other state delegates prior to sessions is important as it is difficult to get to delegates from other states at the sessions.

BOARD OF HEALING ARTS

Dr. Perry discussed the recently enacted legislation concerning the Board of Healing Arts. He said there is a possibility of a suit being brought against the Board over its decision regarding members of the osteopathic group who received M.D. licenses in California. Dr. Perry asked if the Council had changed its attitude in that regard and was assured that it had not. Dr. Perry asked if the Association would assist with legal help if suit was brought. On motion of Dr. Furlow, duly seconded, it was voted to tell Dr. Perry that the Association will do what is necessary to help in case the suit is brought.

TEMPORARY LICENSE LAW

Dr. Perry said that the Board was working on rules and regulations on the new law permitting temporary license. He said these would be presented to the Council when complete. He said one regulation would be that no one would be licensed on a temporary basis beyond the time of possibility of obtaining citizenship.

BUDGET COMMITTEE

Dr. Stuart appointed the following Budget Committee: Dr. Doyle, Chairman; Drs. Furlow, Hollweg, Barger, McCraw and Stuart.

MEDICINE AND RELIGION

Dr. Stuart appointed the following Committee on Medicine and Religion: Dr. Whitener, Chairman; Drs. Kenneth Glover, Mount Vernon; Robert M. Myers, Kansas City; Wayne O. Gorla, St. Louis; Morris Alex, St. Louis, and Robert Duncan, Springfield.

PRESIDENTS AND SECRETARIES MEETING

Dr. Stuart appointed the following committee to work out arrangements for the meeting of presidents and secretaries of component societies: Dr. Matthews, chairman; Drs. Furlow, Barger and Benoit.

DRIVER LICENSE EXAMINATIONS

Dr. Fisher called attention to the liability a physician could incur when he is called upon to examine an applicant for a driver's license. It was decided that this needed further study.

COUNCILORS' REPORTS

Dr. Macnish reported that the St. Louis Medical Society is planning an exhibit at the Bicentennial Celebration in 1964 and would appreciate being lent anything of historical medical interest. He said the Society was beginning its postgraduate course in the near future.

Dr. Whitener said that the St. Louis Medical Society and St. Louis County Medical Society will cooperate in giving oral polio vaccine. He said that the *Post-Dispatch* had carried a story about the Society's Past 65 Plan.

Dr. English mentioned the excellent program on athletic injuries held in Poplar Bluff, August 11.

Dr. Benoit stated that a meeting would be held in Kansas City, September 24 at which "Operation Barnstormer" will be shown. This is the new AMPAC film about political action.

Dr. McCraw reported that a similar meeting will be held in Springfield, September 30.

NEXT MEETING

It was decided to hold the next meeting of the Council on December 7 and 8, with the Budget Committee meeting in the evening of December 6.

Meeting of December 7, 8, 1963

The Council met at Hotel Chase-Park Plaza, St. Louis, December 7, 8, 1963, with Byron M. Stuart, M.D., Boonville, Chairman, presiding. Those present were Drs. Stuart; James M. Macnish, St. Louis; Paul R. Whitener, St. Louis; O. B. Barger, Harrisonville; H. W. Benoit Jr., Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Kenneth C. Hollweg, Kansas City; Leonard T. Furlow, St. Louis; J. I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; H. M. Hardwicke, Jefferson City; Vernon E. Wilson, Columbia; Messrs. Allen D. Smith, Kansas City; Hollister Smith, St. Louis; Edgar Mothershead, St. Louis; Gary Schnedler, Springfield; Frank Woolley, Chicago; Lemoine Skinner, Jordan Singleton, Thomas P. Fox, Ray McIntyre, T. R. O'Brien, St. Louis; Misses Peggy Heileg and Helen Penn, St. Louis. Attending a portion of the meeting were Drs. J. V. Finnegan, St. Louis; James A. Kinder, Cape Girardeau; William D. Perry, St. Louis; Carl D. Siegel, Sedalia; James N. Haddock, Webster Groves; Byron E. Watts and Frederick O. Tietjen, Jefferson City; Mr. James Foristel, Washington, D. C.

UNITED FUND

Mr. O'Brien announced that the Association had received a plaque from the United Fund, all persons in the office contributing and a larger amount than last year being given.

MR. SMITH

Dr. Benoit introduced Mr. Allen D. Smith, in charge of communications for the Jackson County Medical Society.

BLOOD BANKS

Dr. Benoit discussed the blood bank situation in Kansas City and presented H.R. 8426 which had been introduced into the Congress. The bill reads: "Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall not be deemed to be an act in restraint of trade under any law of the United States for any nonprofit blood bank or physician to refuse, or to join together with any other person or persons in refusing, to obtain from or to accept delivery of human blood or human blood plasma from any other blood bank."

The Reference Committee on Medical Education and Public Welfare met following the session of the House of Delegates.

The following resolution which was introduced at the AMA session by Dr. Richard H. Kiene, delegate, and approved by the reference committee and the House of Delegates of the AMA was presented:

> Whereas, House Resolution No. 8426 of the 88th Congress of the United States would provide that a refusal of non-profit blood banks and of physicians to obtain blood and blood plasma from other blood banks shall not be deemed to be acts in restraint of trade under the laws of the United States; and
>
> Whereas, Non-profit blood banks by procuring blood and blood plasma from volunteer donors and scientifically processing such materials for human use, provide an essential part of medical care in the United States; and
>
> Whereas, Physicians who are skilled in clinical pathology and hematology voluntarily and without compensation work in and direct the technical operation of such non-profit blood banks; and
>
> Whereas, These physicians are usually members of their county, state and national medical associations and their respective specialty societies; therefore be it
>
> *Resolved*, By the House of Delegates of the American Medical Association that it favors enactment of legislation by the Congress of the United States, for the intent and purpose for which House Resolution 8426 provides and; be it further
>
> *Resolved*, That copies of this resolution be sent by the proper offices of the American Medical Association to all members of the House of Representatives and of the Senate of the 88th Congress of these United States and; be it further
>
> *Resolved*, That a representative of the American Medical Association appear before any committee of the House of Representatives or Senate to which this resolution or a similar resolution may be referred, and to urge its enactment by the Congress of the United States with the recommendation that "hospitals" be included with "non-profit blood banks and physicians."

FIELD SECRETARY'S REPORT

Mr. McIntyre reported on the following meetings which had been held since the last Council meeting: September 30, Greene County and 8th Councilor District, showing "Operation Barnstormer"; the same program at Jackson County Medical Society on Sept. 24; the Kansas City Southwest Clinical Society; October 6, Maternal Welfare Committee meeting; October 7, Cape Girardeau County Medical Society with Dr. Hollweg as speaker; October 10 and 11, Physicians and Schools conference in Chicago which was attended also by Dr. Guy N. Magness; October 16, a meeting at Clinton with Dr. Hollweg as speaker; October 26, 27, Missouri Academy of General Practice in Kansas City, with Dr. McCraw being elected president-elect; November 6, Public Service Committee; November 11, trip to Perryville to discuss the hyphenation of Ste. Genevieve County with the Perry County Medical Society; November 15, West Central Medical Society with Dr. Hollweg as speaker; November 19, Marion-Ralls-Shelby, at which it was brought out that drugs could not be handled by druggists for the amount that is paid by the state for OASI individuals; November 21, Perry County Medical Society, at which was discussed a proposed hyphenation of the Perry County Medical Society with Ste. Genevieve County (now in Mineral Area Society).

HYPHENATION

After discussion, in which it was stated that the hyphenation of Perry County and Ste. Genevieve was approved by the Mineral Area and Perry County Societies and by doctors in Ste. Genevieve County, on motion of Dr. English, duly seconded, it was voted that the hyphenation be approved and that a new charter be given to the Perry-Ste. Genevieve County Medical Society.

TREASURER'S REPORT

Dr. Doyle presented the report of the Treasurer, which on motion of Dr. Doyle, duly seconded, was filed for audit.

BUDGET

Dr. Doyle presented the following 1964 budget, which on motion of Dr. Doyle, duly seconded, was adopted:

Salaries	$ 70,525.00
Office rent and light	4,700.00
Postage	5,000.00
Stationery, printing, supplies	5,000.00
Journal expense	35,000.00
Telephone and Telegraph	3,000.00
Insurance, Emp. pension plan	8,000.00
Legal and professional fees	3,500.00
Taxes—payroll	2,200.00
Travel expense	7,000.00
Committee expense	51,000.00
Furniture and Fixtures	500.00
General expense	3,000.00
MSMF assessment	25,526.00
MSMF expense	600.00
Total	$224,851.00

PUBLIC SERVICE

Dr. Barger gave the report of the Committee on Public Service as follows:

The Committee on Public Service met on November 6, at the Chase Hotel, St. Louis, with Dr. O. B. Barger, Harrisonville, presiding. Others present were: Drs. Kenneth C. Hollweg, Kansas City; Leonard T. Furlow, St.

Louis; Armand Brodeur, St. Louis; H. M. Hardwicke, Jefferson City; Messrs. Tom O'Brien, Ray McIntyre, Tom Fox, Lemoine Skinner Jr., Jordan C. Singleton and Miss Peggy Heilig, St. Louis.

King-Anderson Hearings—The Ways and Means Committee of the House of Representatives will hold hearings on the King-Anderson Bill November 18-27.

MSMA Statement of Opposition—A statement of opposition from MSMA has been prepared and this was reviewed and approved by the Committee. The statement includes excerpts from the Cason interim committee report on health needs of the aged in Missouri, a review of the health care legislation passed by the 1963 session of the Missouri General Assembly and concludes with statistics gathered by the Missouri Division of Health concerning the method of payment by patients discharged from outstate Missouri hospitals in the last six months of 1962. These statistics show that of a total of 90,192 cases, only 929 could not pay any of their hospitals costs, and of these 929, just 186 were aged 65 or over. The committee suggested that when the statement is forwarded to the Ways and Means Committee, copies be sent to all members of Congress from Missouri, the presidents and secretaries of county societies and the legislative bulletin mailing list. A state-wide news story should also be released at this time, and the statement should be printed, in full, in MISSOURI MEDICINE.

Notices Regarding Hearings—Mr. O'Brien reported that a letter was sent on November 6 to all executive secretaries and presidents of county societies and "Operation Hometown" county chairmen announcing the dates of the King-Anderson hearings, and asking that local physicians write and personally contact their Congressmen concerning the King-Anderson bill.

The Public Service Committee recommends that all county societies and auxiliaries be enlisted in the letter-writing effort to the members of the Ways and Means Committee, as well as to their own representatives, at the time of the hearings.

Public Health—Dr. Hardwicke, Acting Director of the Missouri Division of Health, met with the Committee for the first part of the meeting. He suggested that Public Health has a newly evolving role to play in today's doctor-patient relationship and set forth several ways in which the Division of Health could be helpful in increasing the physician's effectiveness. These were: (1) training public health nurses for assignment as home nursing aids in support of the practicing physicians; and (2) making available the services of psychiatrists to interested doctors for consultation and instructive purposes in cases of patients with emotional and psychoneurotic problems. Dr. Hardwicke's suggestions will be referred to the Council for consideration.

Mobilization for 1964—The Committee recognized and discussed the crucial importance of the outcome of the 1964 elections to the future of the medical profession, and recommends increased activitiy by county societies and individual members in this area.

"Operation Hometown"—Only six of 51 societies have reported "Operation Hometown" chairmen. The committee expressed disappointment in this showing and recommends that societies which have not yet gotten this project under way be urged to do so immediately, by mail and by visits of the Field Secretary.

MMPAC—1963 membership in the Missouri Medical Political Action Committee is 280, compared to 375 in 1962. The Committee feels that personal solicitation for memberships will be required in 1964 for greatest effectiveness of this important organization.

"Barnstormer"—The "Barnstormer" film on political action has been shown in Kansas City and Springfield under MMPAC auspices and showings have been requested for Joplin and the Grand River Society. It was reported that arrangements are also being made for a joint showing for the St. Louis and St. Louis County Societies.

Quackery—After discussion, the Committee passed a resolution urging that the State Board of Medical Examiners secure personnel needed to thoroughly investigate all forms of quackery in Missouri, and pledging the full cooperation of the Committee in publicizing the facts uncovered by such investigations.

Medicine and Religion—An Association Committee on Medicine and Religion has been formed, and the Public Service Committee offers its assistance with publicity, as needed, for the meetings and activities of this new committee.

Communications—The Public Service Committee offers its assistance to local societies and particularly Dr. Donald E. Frein of Leeton, Missouri, and the Johnson County Medical Society in providing health column materials from the AMA and other sources for use if the Society wishes to contribute such a column to weekly newspapers. The Committee recommends that the general topic of such newspaper columns be discussed at the coming meeting of society presidents and secretaries.

On motion of Dr. Barger, duly seconded, the report was accepted.

STATEMENT ON H.R. 3920

Copies of the statement of the Missouri State Medical Association on H.R. 3920, presented by Dr. Durward G. Hall, Representative in Congress, were presented. It was stated that the Statement would appear in the January issue of MISSOURI MEDICINE.

A statement from the St. Louis County Medical Society to the Committee on Ways and Means was given to the Councilors.

INSURANCE

Mr. O'Brien reported that following the discussion on overhead expense insurance for members that he had received one bid and that another was in process and would be reported at the next meeting.

It was pointed out that both Jackson County and St. Louis Medical Societies have group term life insurance available for members and that the carrier wishes to offer the same coverage to the balance of MSMA membership. After discussion, on motion of Dr. Hollweg, duly seconded, it was voted that a committee be appointed to study this type of insurance program for members.

Dr. Stuart appointed the following committee: Drs. Doyle, Furlow, Whitener and Macnish.

WOMAN'S AUXILIARY

Dr. Hollweg said that he had discussed the Advisory Committee to the Woman's Auxiliary with Mrs. Crispell, president of the Auxiliary. It has been suggested that in the future the Advisory Committee be composed of the immediate Past President of MSMA, Chairman of the

Council and the Councilor from the district in which the president of the Auxiliary resides.

On motion of Dr. Hollweg, duly seconded, this was approved.

The Auxiliary also requested that the Roster issue be mailed by MSMA to all members of the Auxiliary. On motion of Dr. Barger, duly seconded, it was voted that the Association mail rosters to members of the Auxiliary.

Dr. Hollweg stated that a decision would be made at the coming meeting of the Auxiliary whether or not their Student Loan Fund would be turned over to MSMF.

MSMF

Dr. Furlow gave the following report of the finances of the Missouri State Medical Foundation:

Status as of December 6, 1963

Total Loans to date (224 loans to 105 students)	$104,020.00
Loans for first semester (40 loans) 1963-1964	19,000.00
Balance on hand	$ 11,266.30

In discussion it was brought out that the MSMA might advance some money against the assessment for 1964 in case funds were needed for the second semester; also it was pointed out that it would be a good thing to get out another letter of solicitation at this time, which was agreed to.

On motion of Dr. Furlow, duly seconded, it was voted that the report be accepted and that funds be advanced by MSMA if necessary.

MEETINGS

Dr. Hollweg reported attending the meeting of the Missouri Hospital Association and said that there seemed to be good rapport; he reported on the conference on "Quackery" sponsored by AMA and the Federal Pure Food and Drug Administration, held in Washington, D. C.; Mr. McIntyre attended in his place an exploratory committee meeting on "Total Patient Care," attended by hospital administrators, nurses, physicians and ministers and hospital chaplains. A workshop on this subject is planned by the group, and Dr. Whitener, Chairman of MSMA Committee on Medicine and Religion will serve on the planning committee.

CIVIL DEFENSE

Dr. Siegel presented material to the Councilors on Health Mobilization Activities, general information concerning Missouri's Civil Defense Emergency hospitals and the Division of Health's expanded function training. He said that four exercises with training had been held, at Carrollton, Cape Girardeau, Hayti and Springfield. He said that the 200 bed emergency hospitals in the state are being up-dated. He reported that in the "Self Help" program Missouri ranked fourth in the nation in the number of people who had had the course. Dr. Siegel requested that the expenses for a postgraduate course to be held in Columbia in January be defrayed to the extent of $100.

On motion of Dr. Furlow, duly seconded, it was voted to grant the request for $100.

On motion of Dr. Benoit, duly seconded, the report was accepted.

"UNDER THE CAPITOL DOME"

Mr. Foristel discussed the Washington AMA office. He said that 600 bills of interest to medicine had been introduced in the present Congress and that it would probably go to 900. He said that bills passed that the AMA had approved were the medical school construction bill, the mental health bill and the mental retardation bill. He said that the Medicare program, for dependents of service personnel, would probably be reduced. He outlined the hearings on the King-Anderson bill which began on November 18, the hearings to be reopened about the second week in January. He praised the work of Representatives Tom Curtis and Durward G. Hall in the hearings and also Dr. Annis.

PROGRAM

Dr. Matthews presented a preliminary program to the Council. Two programs on economics were suggested and the Council favored "Rising Hospital Costs and the Doctor."

Mr. Singleton presented a timetable on publicity for the Annual Session.

In discussion of the Annual Session, Mr. Hollister Smith suggested that the members of MSMA be entertained for cocktails and buffet dinner at the St. Louis Medical Society Building on Sunday evening. He said that if the Council approved, he would present this to the Council of St. Louis Medical Society this week.

A fireside Conference luncheon was held Monday noon.

On motion of Dr. Hollweg, duly seconded, it was voted to accept this invitation if it is forthcoming.

WILSON-MITCHEM SUIT

The case of Wilson-Mitchem vs. State Board of Registration was discussed. It was said that a motion to intervene had been filed for the MSMA, and that also such action was being filed by the Missouri Osteopathic Association. The situation in the State of Washington which is considering a short-term school for the purpose of conferring M.D. degrees was discussed.

MEDICAL CENTER

Dr. Wilson reported that work is being done on the Medical School curriculum and that as of June 1, 1964, preceptorships will be required and that information on community health programs will also be part of the

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1. Dr. Hall spoke briefly at banquet. 2. Head table was seated in two tiers. 3. Past Presidents were honored at banquet. 4. AMA President-Elect Dr. Norman A. Welch was banquet speaker. 5. Dr. Furlow received gavel from Dr. Hollweg. 6. President Furlow

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6

9

and President-Elect Whitener posed together. 7. Fifty Year physicians were honored at the banquet. 8. The banquet drew a large crowd. 9. Dr. Furlow presented a Past President's plaque to Dr. Hollweg.

curriculum. He said that construction on the new VA hospital would begin in 1965, which means there will be 1,000 beds when this is completed. He said that if more classrooms and laboratories were available, the number of students in the medical school could be increased.

INFANT AND CHILD CARE

Dr. Kinder presented the following report for the Committee on Infant and Child Care.

The Committee on Infant and Child Care met at Hotel Chase, St. Louis, on December 7, with Dr. James Kinder, Cape Girardeau, Chairman, presiding. Others present were: Drs. Eugene Schwartz, Springfield; James Pascoe, Nevada; Raymond LaDriere, St. Louis; Guy Magness, University City; H. M. Hardwicke and E. A. Beldon, Missouri Division of Health, Jefferson City; Mr. Jordan Singleton and Mr. Ray McIntyre, MSMA staff, St. Louis.

Polio Immunization—A letter from Dr. Dan Landau, Hannibal, was read which set forth valuable suggestions pertaining to community oral polio immunization programs based upon the experience of such a program recently carried out in the Hannibal area. Reports by Drs. Magness and LaDriere on the mass oral polio immunization program in the St. Louis area and similar one in the Cape Girardeau area reported on by Dr. Kinder, gave the committee three actual experiences from which to consider this type of health program.

After extensive discussion of poliomyelitis immunization the committee made the following recommendations; (1) Both the Salk and oral polio vaccines are satisfactory. Salk vaccine has proved effective and should be continued in use. (2) Oral polio vaccine (OPV) lends itself particularly to mass community use if the physicians of the community wish to conduct such a program. It affords the local physicians a wonderful opportunity to improve the local immunity level and to demonstrate their interest in the health of the community. (3) Physicians should take the lead in any community vaccination programs. (4) If a community program is decided upon, considerable assistance is available through the MSMA office, including information about the experience in programs already carried out in Hannibal, Cape Girardeau and Metropolitan St. Louis. (5) Specifically, in conducting community programs the committee feels that (a) immunization of people of ages three months to 30 years should be emphasized, but immunization is not contra-indicated at any age; (b) specifications for the particular vaccine product being used should be followed; (c) either mono or tri-valent vaccine is acceptable; (d) no other live virus vaccine (smallpox, measles, etc.) should be used within two weeks before or after oral polio vaccination; (e) a physician should be in attendance at all times to answer questions as to the advisability of administering vaccine under various conditions of patient health. (6) It is emphasized that polio vaccination is a countinuing program. After any community effort, the usual community facilities, including doctor's offices, should be utilized to continue immunizations of new susceptibles. Salk or OPV or both can be used in subsequent protection of new susceptibles.

Measles Vaccines—After due consideration, the Committee approved the use of the recently developed vaccines.

Mentally Handicapped Children—The Committee discussed the fact that there is no state provision for care of mentally handicapped children less than five years of age who need institutional care. Recommendation was made that some way be found to remove the barrier of the five year age limit for care of such children in cases of medical indigency.

Conference on Physicians and Schools—Dr. Magness reported on the National Conference on Physicians and Schools sponsored by the AMA, held in Chicago in October. One of the prime recommendations resulting from this conference was that health should be taught in the schools as a solid subject the same as mathematics, English, etc.

Smoking in Schools—After discussion, the Committee voted to recommend that the Association take a position against smoking in schools and recommend that all measures possible be used to prevent smoking by students in schools.

Dental Health for Handicapped Children—The dental health program for handicapped children under the State Crippled Children's Service was discussed. At present there are two mobile units purchased by Elks Clubs of Missouri, operated by the State Division of Health in cooperation with local dentists being used. The ultimate goal is five such units.

In discussion it was brought out that there were no state facilities for care of the mentally retarded child under 5 years of age needing institutional care. Dr. Hardwicke said that money was to be made available for planning of institutions and evaluation centers which might alleviate this situation. He asked that an individual or committee be appointed to work with a state committee on this.

On motion of Dr. Furlow, duly seconded, the Chairman of the Committee on Infant and Child Care was designated for membership on this committee.

On motion of Dr. Hollweg, duly seconded, the report was accepted.

RESOLUTION RE: JEFFERSON CITY BRANCH OF MSMA

Dr. Tietjen opened the discussion of the resolution concerning full-time representation of MSMA in Jefferson City by stating that it would be logical to have the MSMA office in Jefferson City, the Capital city. He stated the reasons for an office in Jefferson City as central location and easily accessible, it is the center of activity of all politics, other agencies are located there, that year round contact with other groups was important.

Dr. Watts said that someone was needed in Jefferson City at all times for contact with the Division of Health and other departmental heads; that too much depends on one person, Tom O'Brien, but that constant contact was needed; that 53 state organizations have headquarters in Jefferson City, the MSMA and LPN being the only health organizations not having offices there.

Questions raised dealt with the cost of such an office, the success of MSMA in the last General Assembly, amount of personnel needed in such an office, members' attitude toward a raise in dues if necessary. The resolution and the action of the House was read as follows:

WHEREAS, The contacts between government and organized medicine are becoming increasingly frequent and intimate, and

WHEREAS, A progressively important function of the executive staff (of MSMA) is representation of organized medicine to and before various governmental bodies and agencies, and

WHEREAS, Such representation would be enhanced by the residence of a member of the MSMA executive staff at the seat of government in Jefferson City; now, therefore be it

Resolved, That the Council shall make necessary budgetary preparations as required for the 1964 opening of a permanent branch office in Jefferson City, and be it further

Resolved, That the Council with the advice of the Executive Secretary, designate and/or employ a full-time member of the executive staff who shall be resident in Jefferson City as an assistant to the Executive Secretary.

Report of the Reference Committee on Miscellaneous Affairs.

"After hearing many speakers pro and con, the Committee recommends that this resolution be returned to the Council for further study with a request that a report be made to the House of Delegates at its annual meeting in 1964."

Dr. Barger moved that the Council take under advisement and report at the next meeting. This was duly seconded.

Dr. Furlow offered an amendment that a committee of the Council be appointed to study the problem. This was duly seconded. On vote, the amendment to the motion was adopted as was the motion.

Dr. Stuart appointed a committee as follows: Drs. Hollweg, Chairman; Furlow, Doyle, Matthews, Barger and Stuart, ex-officio.

COMMITTEE ON MENTAL HEALTH

Dr. Haddock presented the report of the Committee on Mental Health as follows:

The Committee on Mental Health met at the Missouri Hotel, Jefferson City on October 13, with Dr. George W. Forman, St. Joseph, chairman, presiding. Others present were: Drs. William F. Clary, Springfield, G. H. Lawrence, St. Louis; James N. Haddock, Clayton; Henry V. Guhleman, Jefferson City; George Ulett, Jefferson City and Mr. Thomas P. Fox, St. Louis.

Legislation 72nd General Assembly—Dr. Forman reviewed the legislation relating to mental health, enacted in the 72nd Missouri General Assembly. Discussion included: (a) Senate Bill No. 56, establishment of three Intensive Treatment Centers; (b) Senate Bill No. 57, establishment of funds for the mental health centers in Senate Bill No. 56; (c) Senate Bill No. 109, temporary licensure for physicians not citizens of the United States, and (d) Senate Bill No. 143 relating to commitment, acquittal, release and discharge of the mentally ill in criminal cases. The Missouri Bar Association is preparing an analysis of Senate Bill No. 143 to assist the medical profession in the implementation of this law.

The Reference Committee on Resolutions met on Sunday afternoon.

Not Enacted—H.B. 675 concerning malpractice actions against physicians employed by the state of Missouri. This bill was judged by the committee as good legislation and worthy of introduction in the 73rd General Assembly.

The Committee approved request of Dr. Ulett that appreciation be recorded from the Division of Mental Diseases to MSMA for support and assistance with the program introduced by Dr. Ulett, S.B. 56.

Division of Mental Diseases—Dr. Ulett stated that future plans include reduction in the number of patients hospitalized who should not be in mental hospitals and the utilization of such funds to better advantage. Care of patients who require hospitalization as well as new facilities to render such care will be given top priority.

Plans are under consideration for centers to care for retarded children, across the state. Such services will include for example: out-patient day care rendered to children brought to the center and treated during the day while parents are employed. Purchase of land in Springfield, to provide one such center is now under consideration.

As recommended in President Kennedy's program, Missouri Mental Health Centers will include in-patient, out-patient, and care for retarded children. Plans, however, will be made with full awareness of the shortage of medical staff in Missouri.

Dr. Ulett called attention to the fact that the President's program could attract psychiatric staff away from state programs creating a more acute shortage than that which exists at present.

The Committee agreed that for the present, Missouri should concentrate on the implementation of Dr. Ulett's program, the establishment of the three intensive care centers including (a) in-patient, (b) out-patient, and (c) day care for mentally retarded. The Committee suggested that such action would, for the present, satisfy the comprehensive treatment program recommended by the President.

Psychologists in California—Dr. Ulett reported on attempts of psychologists in the state of California to expand their field and status to the level of psychiatrists.

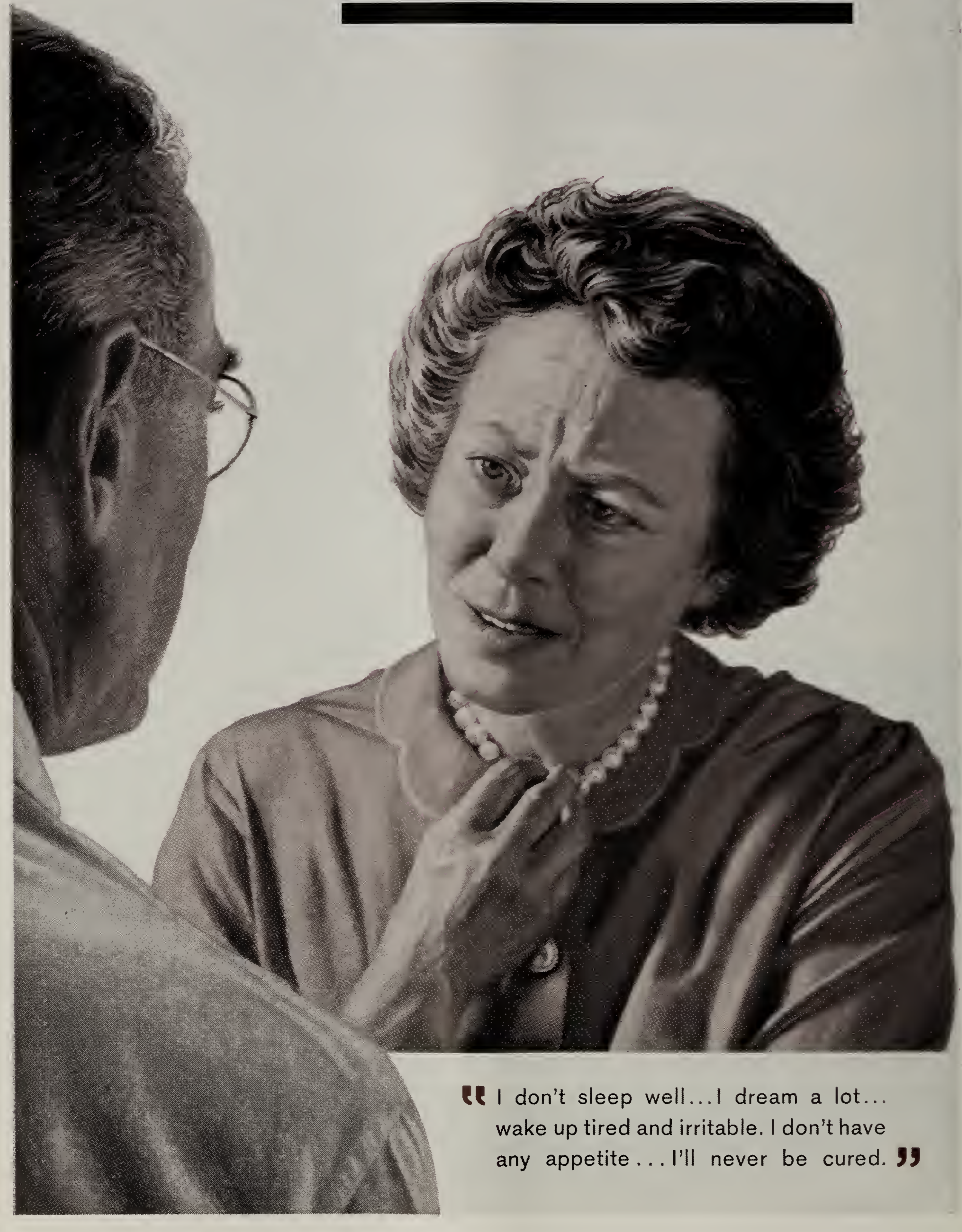
It was suggested that the Association office address the Southern California District Asssociation for more information. Dr. Haddock will furnish the address.

Study of State Hospital No. 2 at St. Joseph—Dr. Ulett reported on the latest developments of investigation by an Interim Legislative Committee of the State Mental Hospital at St. Joseph. Dr. Ulett reported his complete support of the superintendent in his administrative actions investigated by the Interim Committee.

Question was raised regarding monopoly of news media in the City of St. Joseph. It was suggested that inquiry of such monopoly should be pursued by MSMA. Dr. Clary will provide information regarding a similar experience in another state.

It was suggested that in the interest of providing the best patient care in Missouri Mental Institutions, and to protect representatives of the medical profession while in the process of providing such care, developments in St. Joseph be followed closely by the committee and the MSMA.

RECOGNIZE THIS PATIENT?



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If some action seems necessary, it was unanimously agreed that the St. Joseph Mental Health Association might consider appointment of a special committee of physician members of the Eastern and Western Missouri branches of the American Psychiatric Association to study conditions at St. Joseph State Hospital No. 2.

Mental Health Insurance—Dr. Lawrence reported that he is awaiting information from Dr. Al Frank of the Missouri Eastern Division—Committee on Insurance. It was agreed that further study should be made including reports of negotiation with labor unions on new and revised labor contracts which include mental health coverage.

Future Plans—Dr. Forman reviewed letter of October 10, addressed to all county secretaries regarding local mental health committees, speakers, and topics for discussion. It was reported that to date, St. Louis County was the only medical society which has reported a local committee on Mental Health. It was agreed that three months time should be allowed for action on the recommendations. Results will be reported to Dr. George Forman and if necessary, a follow-up letter will be written urging action by the county societies. It was agreed that the second letter could include an endorsement of the Missouri Division of Health and the Missouri Division of Mental Diseases.

It was agreed that all interested county societies be informed that the Eastern and Western Psychiatric Associations, as well as the University of Missouri, have Speakers Bureaus.

Missouri Mental Health Association—Attention was called to the fact that lay membership of the Missouri Mental Health Association should include physicians' wives. Concern was reported to the effect that public information is not disseminated correctly by the lay members of this organization.

On motion of Dr. Barger, duly seconded, the report was accepted.

A mental health clinic in Southeast Missouri was discussed and Dr. Haddock said that the Committee on Mental Health will study this.

RULES ON S.B. 109

Dr. Perry presented the following rules and regulations pertaining to S.B. 109, as approved by the State Board of Registration for the Healing Arts:

Rule No. 1—(a) The applicant is required to make application upon a form prepared by the Board. (b) No application will be considered unless fully and completely made out on the specified form and properly attested. (c) An applicant shall present with the application one photograph in size not larger than 3½ by 5 inches, properly attached to the application blank. (d) Completed applications shall be sent to the Executive Secretary of the State Board of Registration for the Healing Arts, Box 4, Jefferson City, Missouri 65102, by the Superintendent of the hospital. (e) The Board shall charge each person applying to it for a certificate of temporary licensure to practice as a physician and surgeon in the State of Missouri, a fee of five dollars ($5.00). A fee of five dollars ($5.00) shall be charged annually in the event the temporary license is renewed. The fee shall be sent in the form of a bank draft or postal money order or express money order. (Personal Checks Will Not Be Accepted.)

Rule No. 2—(a) Applicant shall secure a recommendation of his moral, ethical and professional conduct from the Superintendent and/or Chief of Staff in the hospital in which he desires to work. (b) Applicants shall notify the Board when they leave the hospital where they are employed. (c) Superintendent or Director of the hospital to which an applicant wants to go, shall notify the Board when an applicant desires to leave or move from one hospital to another. (d) Applicant will be required to appear before the Board at the Board's discretion.

Rule No. 3—(a) Executive Secretary will sign the temporary license. (b) Executive Secretary will submit a list of the names for renewals to the Board for approval.

Rule No. 4—(a) A letter of certification shall be sent only to the Superintendent of the hospital.

Rule No. 5—(a) The Board may terminate a temporary license at its own discretion.

Rule No. 6—(a) Superintendent or other officials of hospitals approved by the Board for temporary licensure, are to furnish the Executive Secretary a list of personnel employed in the hospitals as of January 15 and July 15, of each year.

Rule No. 7—Foreign Graduates—(a) Temporary licenses may be held for a maximum of five (5) years, renewable annually or until eligible to take the Missouri State Board examination. (b) Applicant must have and show proof of a permanent ECFMG certificate or show evidence to the Board that he has passed the equivalent licensing Board examination in another state. (c) Applicant must file photostatic copies and official translations of their medical credentials with the application. Before temporary license can be renewed, applicant must have an application completed by their school of graduation.

Rule No. 8—Interns, Residents and Fellows—(a) Interns, residents and fellows may hold a temporary license for a maximum of five (5) years, renewable annually. (b) Applicants who are graduates of approved schools in the United States and are serving as an intern, resident or fellow in hospitals approved by the Board for temporary licensure in the State of Missouri, must furnish satisfactory evidence of having attended an approved school and receiving their degree by filing a photostatic copy of the professional diploma with the application.

COMMITTEE ON MATERNAL WELFARE

The report of the Committee on Maternal Welfare was presented as follows:

A meeting of the Committee on Maternal Welfare was held at the Missouri Hotel, Jefferson City, on October 6, with Dr. A. C. Trueblood, Clayton, chairman, presiding. Others present were: Drs. C. G. Stauffacher, Sedalia; MacDonald Bonebrake, Springfield; E. E. Wadlow, St. Joseph; Eugene G. Hamilton, St. Louis; Leonard A. Wall, Kansas City; H. M. Hardwicke and D. M. Love, Jefferson City; Mr. Clyde Burch and W. W. Marshall, Jefferson City; Ray McIntyre and Helen Penn, St. Louis.

Purpose—Dr. Trueblood said that the Committee needed to consider two things: to obtain from Mr. Burch an opinion as to any legal liability of the committee connected with the studies that the committee does

In systole and diastole, the human heart produces a maximum signal of only a few millivolts between two ECG limb electrodes. Mixed in with this tiny signal may be some unwanted electrical "noise", caused by power lines, nearby X-ray or diathermy machines, or even ordinary office equipment. Until now, eliminating this noise from the record usually meant time-consuming adjustments and rerunning records until the complexes were clear.

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and the possibility of publishing case reports, and program for the Annual Session.

Work of Committee—The studies carried on by the Committee were explained to Mr. Burch who is from the Attorney General's office and he answered questions from the members present. Discussion included, the reporting by the Division of Health to the committee of maternal deaths would be covered legally because it is for research purposes, there is no coercion if the involved physician does not wish to discuss the case, that identification, even geographical, is not necessary for the dissemination of information by the committee, what could and could not be subpoenaed in any legal procedure, the similarity of a published CPC or case report to the work of the committee, the possibility of changing dates to help in lack of identification, that the committee could not legally swear that date is given to them correctly.

Following discussion, Mr. Burch suggested that he address a letter to Dr. Hardwicke and outline his expressed views on the legal points which could be of help to the committee.

On motion of Dr. Bonebrake, it was voted to ask that an informal opinion be given in writing, including opinion as to what constitutes identification.

Annual Session—The value of an annual report by the committee at the luncheon meeting was stressed and it was stated that the report would come from the Eastern Division of the state at the 1964 session.

Guest Speaker—Dr. Trueblood said that a place had been made on the program for a gynecologic presentation in a surgical panel on Monday afternoon, March 9.

After discussion, it was left to Dr. Trueblood to obtain the speaker for the afternoon session and to possibly ask him to give a talk at the luncheon meeting. It was pointed out that the speaker would also be asked to speak at a dinner that evening of the St. Louis Gyn. Society.

Dr. Hardwicke said that the letter referred to in the report had been received and turned over to the Committee.

On motion, duly seconded, the report was accepted.

NEXT MEETING

It was decided that the next meeting would be held on February 2, a one day meeting if possible.

Meeting of February 2, 1964

The Council met at Hotel Chase, St. Louis, with Byron M. Stuart, M.D., Boonville, Chairman. Those present were Drs. Stuart, Joseph L. Fisher, St. Joseph; James M. Macnish, Paul R. Whitener, St. Louis; O. B. Barger, Harrisonville; H. W. Benoit Jr., Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Kenneth C. Hollweg, Kansas City; Leonard T. Furlow, St. Louis; John I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; Vernon E. Wilson, Columbia; H. M. Hardwicke, Jefferson City; Charles B. Wheeler, Kansas City; A. E. Spelman, Smithville; Messrs. John W. Noble, Kennett; Jordan Singleton, Edgar Mothershead, Hollister Smith, Lemoine Skinner, T. R. O'Brien, Ray McIntyre, Thomas P. Fox, St. Louis; Allen Smith, Kansas City; Gary Schnedler, Springfield; Misses Peggy Heilig and Helen Penn, St. Louis.

KANSAS CITY BLOOD BANK

Drs. Wheeler and Spelman discussed the Community Blood Bank of Kansas City Area, Inc., which was charged by the Federal Trade Commission in a complaint issued July 5, 1962, as having entered into an agreement to restrict the sale and distribution of blood in interstate commerce. The officers, area hospitals and sixteen pathologists, all having some affiliations with the Blood Bank, were charged in the FDA complaint.

Hearings were conducted in the summer of 1963 before an FDA examiner. Regardless of the decision, the case is expected to go to the Federal District Court of Appeals, and perhaps eventually to the U. S. Supreme Court.

Differences in operating procedures of the Community Blood Bank, which is a nonprofit agency, and Midwest World Blood Banks, a commercial enterprise in Kansas City, were explained by Drs. Wheeler and Spelman. It was pointed out that the Federal Trade Commission considers blood as a commodity for sale, whereas the physicians consider it as a service in patient care.

A panel dealt with "Current Concepts in Treatment of Chronic Renal Disease."

Dr. Wheeler read a resolution which is to be presented to the Jackson County Medical Society delegates on February 17, 1964, which, if adopted, will be presented to the House of Delegates of MSMA in March and will request a special assessment to assist in defraying legal and other costs of the case. The Jackson County Medical Society is to vote on a similar resolution, assessing its own members, in the near future.

It was pointed out that this was brought to the Council for information only and not for action at this time.

TREASURER'S REPORT

Dr. Doyle reported that the books of the Association had been audited and showed a surplus of $8,370.41 for the year 1963. He said that the financial statement would appear in the Delegates' Handbook. Upon motion of Dr. Doyle, duly seconded, the report was accepted.

BRANCH OFFICE

Material on a meeting held by a committee of the Council, to study the establishment of a branch office in Jefferson City, was reported.

Following discussion, on motion of Dr. Furlow, duly seconded, it was voted that the Council, having studied all the information, go on record as not approving the establishment of a branch office in Jefferson City, based on the financial and psychological reasons shown in the report. There was one dissenting vote cast to the motion.

PROGRAM

Dr. Matthews said that many persons had worked on the program and that 12 groups were taking part in furnishing speakers or panels. He reviewed the scientific program for the session.

Dr. Matthews said a suggestion had been made on change of timing of the Annual Session as follows: have House of Delegates and reference committees meet on Thursday evening, scientific programs on Friday and Saturday, with banquet Saturday evening, and closing with House of Delegates meeting on Sunday morning. He asked the Council to consider the suggestion for later discussion.

MMPAC

It was reported that Dr. Ralph Perry, chairman of MMPAC, was disappointed with the results of the 1963 solicitations for MMPAC. It was announced that there will be a meeting of the board of MMPAC during the Annual Session of MSMA. It was agreed that a resolution urging support of MMPAC by all members, should be prepared for consideration of the Council at the March 8 meeting.

PROPOSED MEETING OF PRESIDENTS AND SECRETARIES

The suggested meeting for presidents and secretaries was discussed. It was brought out that topics of discussion at the meeting should be current national legislation, coming political campaigns, liaison with the state office and problems of local societies.

Several dates for such meeting were discussed, the consensus being that the first meeting shall be combined with a Council meeting, the Council to meet Friday afternoon and Saturday and the other meeting to begin with a dinner on Saturday evening, the entire meeting to adjourn after a session on Sunday morning and early afternoon. It was decided that these plans be carried out on May 15, 16 and 17.

MSMF

Dr. Furlow presented a report on the Missouri State Medical Foundation which he said would appear in the Delegates' Handbook. The loan plan that had been presented by Dr. Bass was discussed and it was announced that the plan was ready for incorporation.

KERR-MILLS

Mr. O'Brien reported on a meeting held recently in Jefferson City of the advisory committee to the Division of Welfare concerned with implementation of the drug program of the Kerr-Mills act. He said that some drugs were added and the charge on insulin was changed. Mr. Carter of the Division of Welfare is obtaining legal opinion as to the payment of cost of drug plus $1.00 to physicians who dispense. He also is reviewing the costs of the program and expects to report further about March 1. The Committee on Aging will have information about this to present to the House of Delegates.

BOUND VOLUME PRESENTED TO DR. HOLLWEG

A bound volume of the St. Louis County Medical Society Bulletin for the year 1963 was presented by Dr. Whitener to Dr. Hollweg.

OSTEOPATHS IN PRIVATE HOSPITALS

It was announced that osteopaths had applied for staff membership in several hospitals in Springfield. A letter giving legal opinion on this question was requested by several councilors and Mr. O'Brien said it would be forthcoming.

MENTAL HEALTH

Two actions by the Mid Missouri Medical Society were presented: (1) The Mid Missouri Society desires to endorse and encourage the program of the Division of Health, implementing the effectiveness of the practicing physician by providing his patients, through him, such ancillary personnel and facilities as are found beneficial. (2) The Mid Missouri Medical Society requests medical representation of practicing physicians and volunteers its members for appointment to the subcommittees of the executive committee for mental health planning in Missouri.

These were discussed, as well as the situation on future mental health and mental retardation programs in the state, by Dr. Hardwicke. He advised that physicians make themselves available for such committees, in the interest both of medicine and private enterprise.

After discussion of the State Mental Health Planning Committee and the subcommittees of this committee, Dr. Hollweg said he would make MSMA appointments thereto to be announced in the near future.

PERRY-STE. GENEVIEVE

It was announced by Dr. English that a charter had been presented to the newly organized Perry-Ste. Genevieve Society on January 23, 1964.

CONFERENCE ON OSTEOPATHY AND MEDICINE

A letter was read from the AMA Committee on Osteopathy and Medicine saying that they wished to hold a meeting in April to discuss the relationships of M.D.'s and osteopaths. It was decided that the date of April 5 be suggested.

MEDICINE AND PHARMACY

A meeting of the AMA Commission on Medicine and Pharmacy to be held in Chicago, March 12 and 13, was announced. The AMA will pay expenses of two representatives but will welcome others. On motion of Dr. Furlow, duly seconded, Dr. Stanley S. Peterson and Milton B. Ozar were selected as representatives to attend the meeting.

OUTSTANDING PHYSICIAN

A request from Dr. Fishbein, now editor of *Postgraduate Medicine*, that an outstanding Missouri physician be named was discussed. On motion of Dr. Hollweg, duly seconded, it was voted to give the name of William Beaumont.

NORTHWEST MISSOURI MEDICAL SOCIETY

On motion of Dr. Furlow, duly seconded, it was voted to change the name of the Nodaway-Holt-Atchison-Gentry-Worth County Medical Society to Northwest Missouri Medical Society, as the society had requested.

Byron M. Stuart, M.D., Chairman.

The Speaker referred the report of the Council to the Reference Committee on reports of officers, noting that those parts of the minutes, principally committee reports to the Council, which had been referred to other reference committees, had been marked out of the Council report.

The Reference Committee on Constitution and By-Laws listened to discussion at Sunday afternoon meeting.

SUPPLEMENTAL REPORT OF THE COUNCIL

Byron M. Stuart, M.D., Boonville: The Council met at 9:00 a.m., Sunday, March 8, in the Coach Room, Hotel Chase, with the Chairman presiding.

The following information and resolution regarding component society elections of officers was, on motion duly seconded, approved for presentation to the House of Delegates:

The uniform election of officers in the month of October by component societies of the Missouri State Medical Association would greatly increase the efficiency of the state organization and ease the administration of local societies themselves.

1. Election of county society officers in October would facilitate the handling of dues. After the Association staff prepares and mails dues billing forms, it is the responsibility of the secretaries of the local society to receive those dues—local, MSMA and AMA—and provide current membership records.

Society secretaries must notify the MSMA office by November 15 of: (1) the amount set for local society dues for the coming year; and (2) the name and address of the incoming secretary. The name of the secretary for the coming year is needed for inclusion on the billing form since the bill tells each individual member where he should send his dues. Unless new officers are elected prior to early November it is, of course, impossible to include this necessary information on the billing forms and dues payments may be misdirected or even lost.

The Association office must also send the incoming secretary two duplicates of all bills sent to members of his society—one to be returned to MSMA with the payments and the other to remain in the society's office files. If his identity is not known early enough, the whole process is confused and delayed. The uniform election of officers in October would, thus assure correct records and contacts between the local society secretary, in particular, and the state Association.

Uniformity of the time of election need not affect any society's installation date, which is a December or January tradition in many societies. What is important is that the new officers are known in time for maximum efficiency in administrative procedures.

2. Election in October would enable duly elected delegates to the House of Delegates more effectively to study and discuss vital issues with their colleagues and Association officers in preparation for the Annual Session. Each year, the Association sends a Delegates Handbook containing information on issues to come up before the House to each duly elected delegate several weeks before the Annual Session.

However, if the delegates and alternates were chosen in October, they would have a better opportunity to become acquainted with the questions to come before the House through information made available to the MSMA membership and through increased contact with their Councilors.

They would also have ample time to discuss the issues with members of their societies, become aware of their colleagues' positions and, thus, represent their society in the deliberations of the House of Delegates in a more meaningful manner.

3. With elections in October, a meeting for the orientation of newly elected officers of all local societies could be held prior to the beginning of their terms of office. Uniform, early elections would enable incoming officers to prepare for their term of office and would make possible and useful a workshop meeting for these new officers.

This meeting would be held for the purpose of acquainting the incoming officers with various situations and issues expected to arise during the coming year. At the same time, the Association would offer whatever assistance the new officers might feel they would need in the administration of their societies, in such areas as collection of dues, public service projects, operation of the House of Delegates and programming of meetings.

By familiarizing incoming officers with the job ahead, before their term of office begins, they will be better prepared to effectively assume the responsibilities of their offices immediately upon being installed.

Uniform election of society officers in the month of October would increase the effectiveness of both the state Association and the component societies. The Council therefore submits the following resolution to the House urging local societies to held their annual elections in the month of October, beginning in October 1964.

Whereas, There is a long-standing need for uniformity in the dates for election of officers by the component Societies of the Missouri State Medical Association, and

Whereas, The election of officers by said societies during the month of October would facilitate the billing and collection of dues by local officers and the state Association, and

Whereas, The early election of officers would enable duly elected delegates to the House of Delegates more effectively to study and discuss vital issues with their colleagues and Association officers in preparation for the Annual Session, and

Whereas, An annual workshop for the orientation of newly-elected presidents, secretaries and other local society officers could be planned and held prior to the beginning of their terms of office if officers were elected in October, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association hereby request and urges each component society of the Association to elect their officers at a meeting during the month of October, beginning in October, 1964.

The Speaker referred this material and resolution to the Reference Committee on Resolutions.

DR. STUART: The Council considered the following resolution on MMPAC and on motion, duly seconded, voted to present it to the House of Delegates.

WHEREAS, Advocates of compulsory federal programs of health care are once again posing a threat to the freedom of the medical profession, and

WHEREAS, It has been shown conclusively that whatever need that exists for medical assistance in our nation is being met on state and local levels, particularly through the implementation of the Kerr-Mills Act, and

WHEREAS, The King-Anderson bill is not only unnecessary and would increase the tax burden of persons of all ages, but would be the first step toward federal control of health care for the entire population, and

WHEREAS, The King-Anderson bill and similar legislative proposals will be defeated only if candidates friendly to the medical profession and dedicated to the preservation of our private system of health care are elected to office, and

WHEREAS, It is imperative that the medical profession be in the forefront of the fight against federal interference with our health care system, and

WHEREAS, it Is the responsibility of every physician to take an active part in this year's vital elections, and

WHEREAS, The Missouri Medical Political Action Committee has been established to make medicine's voice heard at the polls, and

WHEREAS, The most effective way for each Missouri physician to participate in political activities is through financial support of MMPAC, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association urges each member of the Association to join the fight against federal medicine by joining MMPAC immediately, and, likewise, urges each component society of the Association to undertake membership drives on behalf of the state medical political action committee.

The Speaker referred this resolution to the Reference Committee on Reports of Officers.

DR. STUART: The Council considered the following resolution from the Jackson County Medical Society and on motion, duly seconded, voted to present it to the House of Delegates:

WHEREAS, The Jackson County Medical Society recognizes a moral obligation to assist members of the medical profession who have, as a result of their donating time and effort to the nonprofit Kansas City Community Blood Bank, been named as respondents by the Federal Trade Commission and

WHEREAS, These physicians, in defending themselves during 15 weeks of hearings in the summer of 1963, required legal representation to the extent of an estimated $50,000 and

WHEREAS, Further legal action may be necessary to protect the nation's system of volunteer blood donation from the governmental agency's attack and

WHEREAS, The Jackson County Medical Society has assessed its own membership $30.00 and thereby raised some $16,000 for the payment of legal fees and

WHEREAS, The Jackson County Medical Society plans to solicit further help from the medical profession in the State of Kansas and from the American Medical Association, therefore be it

Resolved, That the House of Delegates of the MSMA approve an assessment of its individual members of $5.00 to assist in the payment of legal fees and costs incurred in this litigation and be it further

Resolved, That the disbursal of such funds be determined by the Council of the MSMA.

The Speaker referred this resolution to the Reference Committee on Amendments to the Constitution and By-Laws.

The following material dealing with the 1963 resolution regarding establishment of a branch office in Jefferson City, appearing in the Handbook, was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

ESTABLISHMENT OF ASSOCIATION BRANCH OFFICE IN JEFFERSON CITY

In the 1963 House of Delegates, a resolution was introduced calling for the establishment of a branch office of the Association in Jefferson City. The reference committee which examined the proposal recommended that the question be returned to the Council for further study during the year, and this recommendation was approved by the House.

As a consequence, the Council considered the proposal at some length on three occasions at which times several members of the Association appeared to discuss the question.

At the December Council meeting a special committee of the Council was appointed to investigate the matter further. This committee met in Jefferson City on January 5 to collect additional data and hear additional discussion on the proposal. The report of that committee, and the action taken on the report by the Council at its meeting of February 2, follows.

The Special Committee of the Council to Consider the Question of a Branch Office of the Association in Jefferson City met Sunday, Jan. 5, 1964, in Jefferson City.

Present were Drs. Leonard T. Furlow, O. B. Barger, John I. Matthews, Byron Stuart and Charles R. Doyle. Also present were Senator Cason and Messrs. John W. Noble, Tom R. O'Brien and Lemoine Skinner Jr. In the absence of Dr. Kenneth C. Hollweg, because of illness, Dr. Furlow acted as chairman.

The meeting opened with the chairman's reading of the resolution introduced in the 1963 House of Delegates regarding the proposed branch office, together with the report of the Reference Committee on Miscellaneous Affairs.

Mr. O'Brien, at the chairman's request, then presented information as to the locations of medical association headquarters in other states. It was noted that only one medical association, Illinois, has a branch office in the state capital. Mr. O'Brien reported that the New York society formerly had a branch office in Albany, but that it has been discontinued. He indicated that he would continue his effort to discover the reason for giving up the capital branch office.

At the invitation of the Chairman, Dr. Matthews then set out in substantial detail the reasons why the physicians of Cole County believe it is important to medicine in Missouri that there be established a branch office in the state capital to be headed by a full-time member of the staff, resident in Jefferson City. He stated that no extensive effort had been made to solicit the views of other association executives already headquartered in the capital.

Broadly, Dr. Matthews divided his reasons for establishing the proposed Jefferson City branch office under the following headings:

1. *Geography.*—Jefferson City is centrally located and readily accessible to the whole state—increasingly so as the highway program approaches completion. Dr. Matthews stated in this connection that it had been the experience of executives of other associations in the state that their members responded favorably to moving their headquarters to the capital. He said this location gave the membership throughout the state a more direct feeling that the Association existed to serve—and that it belonged to—its members in all parts of the state.

2. *Contacts with Government.*—Dr. Matthews made a strong point of the importance of close and effective relationships between the medical profession and all levels of state government, executive, legislative and judicial. He emphasized that the business of government was the

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hypertensive

a 15 mm. Hg. drop in diastolic pressure would also suit her very well

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INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.

1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. *J. Amer. Geriat. Soc.* 11:945 (Oct.) 1963.
2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

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main industry of Jefferson City and that governmental activities centered there had importance for the entire state.

Under the executive branch of the state government he noted the following as units having special importance for organized medicine: Division of Health, Division of Mental Health, Welfare, Vocational Rehabilitation, Highway Patrol, Civil Defense, Water Pollution Board and Insurance Department. He made a special point of the importance of continuing close contact with the State Board of Registration for the Healing Arts in view of the board's projected plans to expand its force of investigators and to enforce compliance with the Medical Practice Act more stringently.

Through the whole range of executive department agencies and bureaus, Dr. Matthews emphasized, there is an observable growth in programs and personnel with all of which and of whom he expressed the opinion organized medicine should have continuing contact even if such contact were, in many instances, simply casual and social. From all this he foresaw a growth in MSMA's awareness of problems and opportunities and an enhancement of the Association's prestige in the eyes of government and the public.

With the legislative branch of the state government Dr. Matthews acknowledged that we have an excellent record of success—particularly in the last session when the measures we favored were adopted and those we opposed were defeated. He expressed the view, nevertheless, that it would be helpful to be on the spot in Jefferson City to maintain contact with legislative committees functioning between formal sessions of the General Assembly.

Though he was not specific, Dr. Matthews expressed the view that a full-time staff representative in Jefferson City could achieve for us a closer rapport with the judiciary branch of the state government.

3. *Contacts with Ancillary Associations.*—He turned next to an enumeration of the number of associations presently located in Jefferson City whose interest touch the same areas as do those of the MSMA. Among these he enumerated the Missouri Hospital Association and the state associations of dentists, osteopaths, nurses, optometrists, druggists and even chiropractors.

4. *Contacts with Other Associations.*—More broadly he noted that the Farm Bureau, the state Chamber of Commerce and recently, the Missouri Bar Association, as well as many others, are all headquartered in the capital. He expressed the view that valuable coordinating contacts with these groups would result from a year-round active office in the capital.

5. *Press Contacts.*—Dr. Matthews noted finally that the state's three major daily newspapers, the *St. Louis Post-Dispatch,* the *Globe-Democrat* and the *Kansas City Star* all maintain bureaus in Jefferson City as do the Associated Press and the United Press International. He said that Jefferson City was a major source of news going out widely through the state and nation. He expressed the opinion that it would be good for the public relations of the society to develop continuing close relationships with the journalists of the capital city, and he expressed the opinion that an office there would help substantially in this regard.

Following Dr. Matthews' extensive presentation, the chairman commented that Tom O'Brien's record over the years with the legislature has been outstandingly successful. He noted that our position in relation to the state government differed from that of many other organized groups representing special economic interests. MSMA, he asserted, has always identified its goals with the long-range public interest.

He then put two questions to the committee.

First, he asked whether or not, from a psychological point of view, the establishment of a permanent MSMA office in Jefferson City might not make a wrong impression; might it not suggest that we too were concentrating on a group interest rather than the interest of the public at large?

Second, he asked whether there would be, between sessions of the legislature, real work enough to keep an office busy and to justify the expense.

The chairman then asked Mr. O'Brien to give an estimate of the annual cost of operating a branch office in Jefferson City.

Mr. O'Brien projected the following minimal budget for an MSMA branch office in Jefferson City:

Salaries (director and stenographer)	$16,000
Rent	2,400
Telephone and telegraph	1,000
General expense, including travel	1,800
Printing, postage and supplies	1,000
Club dues	800
Insurance, pensions, etc.	2,000
Payroll taxes	600
Total	$25,600

Mr. O'Brien expressed the view that the above total was a realistic minimum.

At the invitation of Dr. Barger, Senator Cason discussed the problem. He agreed with the purposes of the first paragraphs of the resolution proposing the branch office, that is he agreed that relationships with government are becoming increasingly important to medicine. He took the position, however, that the really important part of government for MSMA is the legislative branch, and he states that our success with the legislature has been impressive.

He then specifically made the point that a great part of this success with the legislature may be attributed to the very fact that we do not have a branch office in the capital. MSMA is not, he said, thought to be a "powerful lobby" in Jefferson City. When Mr. O'Brien comes to town, he comes as the recognized representative of a professional group concerned for the public health and the public interest. He is not established in Jefferson City in a permanent office that can be pointed to as the headquarters of a lobby.

Senator Cason said in summary that he disagreed with paragraph three of the resolution calling for the residence of a member of the staff in Jefferson City. He stated it would hurt our relationship in the legislature and be an embarassment to our friends on the floor.

The place to develop good relationships with legislators is not the state capital, but back home in their districts, Senator Cason stated. He urged that doctors become more active in maintaining closer contacts with candidates and legislators and suggested that perhaps an additional MSMA field representative could help bring this about. Legislators, he concluded, are primarily responsive to the views of the voters in their districts. The influence of physicians in every House and Senatorial district, he asserted, could be increased by greater grass-roots efforts. Senator Cason's views were reinforced by Former Senator John Noble who stated that in his personal experience MSMA "has had one of the strongest lobbies in Missouri precisely because it is not identifiable as a lobby." Our representative is the executive secretary of a professional association and not a lobbyist.

Mr. Noble added that contacts with other associations in the capital would probably turn out to involve entanglements in activities unrelated to the purposes of MSMA. He expressed the view that a staff member's continuous residence in Jefferson City and his necessary contacts with other groups and officials of government would encourage people to draw inferences as to MSMA's objectives and alliances which at present are completely out of the picture.

One panel discussion was on drug therapy.

The chairman then called on individual members of the committee for additional comment. Dr. Stuart said he had none to make. Dr. Doyle, MSMA treasurer, asked where the $26,000 needed for the proposed branch office would come from. He stated it would require an additional $10 a year in dues on top of the $7.50 MSMF assessment that we must ask the House of Delegates to reimpose.

Dr. Matthews, in summation, stated he did not wish to press the argument further, but said that the Cole County Society does feel there are many valid reasons for the establishment of the branch office. He asked the committee to consider carefully all the pros and cons. He emphasized it was not the wish of the Cole County physicians to create a schism of any kind.

In response to a question of Dr. Barger, Dr. Matthews emphasized that during his whole 12 years of residence in Jefferson City, the local physicians have felt strongly that they would like to see an MSMA branch office established in the capital.

Dr. Doyle commented that he believed the Cole County Society itself could do a big part of the job it wanted done and expressed the opinion that it would be difficult to find a state staff man with the diplomacy and talents the position would require. The right man, he emphasized, would certainly be expensive.

After adjourning for lunch, the committee reconvened in executive session and unanimously adopted the recommendation of the chairman that the record of the committee's discussion be set down in detail and presented to the Council as a whole. The decision in the matter and the recommendation to the House of Delegates, it was agreed, should be the action of the entire Council.

ACTION OF COUNCIL, FEBRUARY 2, 1964, REGARDING BRANCH OFFICE OF THE ASSOCIATION IN JEFFERSON CITY

Material on a meeting held by a Committee of the Council to study the establishment of a branch office in Jefferson City, was reported. It was pointed out that the minutes of the meeting would appear in the Delegates' Handbook.

"Following discussion, on motion of Dr. Furlow, duly seconded, it was voted that the Council, having studied all the information, go on record as not approving the establishment of a branch office in Jefferson City, based on the financial and psychological reasons shown in the report. There was one dissenting vote cast to the motion."

The Speaker referred this material to the Reference Committee on Amendments to the Constitution and By-Laws.

Kenneth C. Hollweg, M.D., Kansas City, President, announced the Committee on Nominations as follows:

COMMITTEE ON NOMINATIONS

John N. Martin, M.D., St. Joseph.
F. A. Barnett, M.D., Paris.
David N. Kerr, M.D., St. Louis.
Edgar W. Davis, M.D., St. Louis County.
G. W. Winn, M.D., Boonville.
Donald H. Giesler, M.D., Osceola.
Philip L. Byers, M.D., Kansas City, Chairman.
Kenneth E. Knabb, M.D., Springfield.
B. J. Bass, M.D., Salem.
Ben M. Bull, M.D., Ironton.

Don C. Weir, M.D., St. Louis: I wish to present the following resolution:

Whereas, The American Medical Association has established and repeatedly reaffirmed the principle that, as the practice of radiology constitutes the practice of medicine, benefits for these services should be included in medical insurance contracts, and should not be included in hospitalization insurance contracts and

Whereas, The House of Delegates of the American Medical Association in session November, 1960, passed Resolution No. 27 which in its last paragraph states, "Resolved, That the American Medical Association urge all constituent associations to take such action as may be deemed necessary to effect the transfer of professional services from Blue Cross Plans and all other hospitalization plans into Blue Shield or that section of insurance plans providing for professional services, wherever such situations exist," and

Whereas, The House of Delegates of the Missouri State Medical Association has protested the inclusion of benefits for these medical services in Blue Cross contracts and recommended their coverage under Blue Shield contracts and

Whereas, At the present time there are some benefits for both diagnostic and therapeutic radiology included in Blue Cross contracts and

Whereas, The Group Hospital Service, Incorporated (Blue Cross), and its member hospitals are negotiating a revised contract which involves the medical practice of radiology, which is to be included under the hospitalization protection program, therefore be it

Resolved, That the Missouri State Medical Association reaffirm its opposition to any contract or expansion of coverage of any professional medical services between Blue Cross and its member hospitals which would involve the practice of radiology.

The Speaker referred this resolution to the Reference Committee on Medical Education and Public Welfare.

Henry C. Allen, M.D., St. Louis: I wish to present the following resolution:

Whereas, The House of Delegates of the Missouri State Medical Association has previously endorsed the principle of a Medical Examiners System for the State of Missouri, and

Whereas, A bill was introduced into the 1955 Legislature establishing a Medical Examiners System which bill died in committee and

Whereas, There is still a lack of scientific investigation of medical-legal deaths in most of the areas of Missouri and

Whereas, The Coroner System, as practiced in Missouri is outmoded and archaic, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association reaffirm its endorsement of the principle of a Medical Examiners System for the State of Missouri, and be it further

Resolved, That the House of Delegates of the Missouri State Medical Association direct its Council to seek the introduction of a Medical Examiners Bill into the 1965 Legislature of the State of Missouri and to actively promote its passage.

The Speaker referred this resolution to the Reference Committee on Medical Education and Public Welfare.

William M. Kitchen, M.D., Kansas City: I wish to present the following resolution:

Whereas, Resolution No. 6, submitted by the Missouri delegation at the 111th Annual Session of the American Medical Association in Chicago, 1962, would have changed the make-up of the Council on Medical Education and Hospitals, and

Whereas, This Resolution was studied by the Reference Committee on Medical Education and Hospitals and replaced by resolution of similar intent which was then referred to the Board of Trustees of the AMA for study and

Whereas, The Board of Trustees, in Atlantic City, June, 1963, accepted only one sentence from the 1962 Reference Committee's report—namely, "that in the selection of all individuals as nominees for election to Council membership, deliberate care shall be exercised to assure that those selected understand and are sympathetic to the medical needs of the public," and

Whereas, The 1963 recommendation of the Board of Trustees was replaced by a Reference Committee's report which would amend the By-laws in a manner far different than that intended by the original 1962 Missouri resolution, and

Whereas, The Council on Medical Education has continued to function in a manner which has failed to satisfy many conscientious physicians who are concerned with graduate and postgraduate medical education programs in private community hospitals and with the preservation of traditional medical preceptorship, therefore be it

Resolved, That the Reference Committee on Amendments to Constitution and By-laws at the next Annual Session of the AMA be requested by the Delegates of the MSMA to seriously consider a By-laws provision which would remedy the appalling lack of representation on the Council of Medical Education of physicians engaged primarily in the private practice of medicine but also trained, experienced and participating in graduate and postgraduate medical education programs in private community hospitals, and be it further

Resolved, That copies of this resolution be sent to all officers and members of the House of Delegates of the AMA together with any material which the Missouri Delegates to the AMA consider necessary to support this resolution.

The Speaker referred this resolution to the Reference Committee on Medical Education and Public Welfare.

David N. Kerr, M.D., St. Louis: I wish to present the following resolution:

Whereas, The disease pulmonary tuberculosis continues to be a major cause of morbidity and mortality in the State of Missouri, and

Whereas, State facilities for the care of such patients who are unable to afford private care is confined at present to one institution, and

Whereas, There are certain city facilities in the State of Missouri who provide care for city residents and could be made available for care of state residents on payment of adequate expenses by the state for such care, therefore be it

Resolved, This House of Delegates go on record as strongly recommending to the Missouri State Legislature that it reconsider bills presented to it at the last session which were not voted upon, and be it

Resolved, Further, that the Missouri State Legislature be urged to pass necessary legislation providing for adequate reimbursement of city facilities for the care of medically indigent tubercular patients in out-state Missouri, and further be it

Resolved, That copies of this resolution be sent to the State Tuberculosis Society, the Tuberculosis and Health Association of St. Louis, Kansas City, and any other organizations interested in the care of tuberculosis and that copies be sent to state officials concerned and to members of the legislature including candidates who will be running in the next election.

The Speaker referred this resolution to the Reference Committee on Medical Education and Public Welfare.

Dr. Kerr: I wish to present the following resolution:

Whereas, A "Good Samaritan" bill was presented to the Missouri State Legislature at its last biannual session and was defeated, and

Whereas, It is felt that there are many instances where doctors suffer by trying to attend patients on an emergency basis on the scene in accident cases and the like, and

Whereas, As physicians we should be free to help in these emergencies when necessary without the ever present possibility of legal action against us where action is taken, and

Whereas, It is a basic tenet of our ethics that we help all persons in distress, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association hereby strongly recommend to the Missouri State Legislature that legislation to protect the physician and other ancillary medical personnel in the case of emergency treatment be again considered for enactment by the legislature of the State of Missouri at its next session, therefore be it

Resolved, That a copy of these Resolutions be sent to all state officers concerned, to the members of the Legislature of the State of Missouri, and to candidates for state office and legislature in the upcoming elections.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Dr. Kerr: I wish to present the following resolution:

Whereas, Over the past many years the focus of medical practice in this state has moved more into the urban and suburban areas, and

Whereas, This has created large concentrations of physicians in certain districts of the MSMA, and

Whereas, Other areas have been depleted of physicians, and

Whereas, Provision for this inequity is not provided for in Chapter III of Section 2, of the Constitution of the Missouri State Medical Association, therefore be it

Resolved, That the President of the Missouri State Medical Association appoint a committee charged with making a thorough study of the present delegate apportionment with suggestions for such changes as will result in a more equitable allocation of delegates, and therefore be it

Resolved, That this committee shall consist of physicians who have had past experience as members of the Missouri State Medical Association House of Delegates and/or as state officers of the Association, be it further

Resolved, That a complete report with suggestions be presented to the next annual meeting of the House of Delegates of the Missouri State Medical Association.

The Speaker referred this report to the Reference Committee on Amendments to the Constitution and By-Laws.

Berneil W. Andrews, M.D., Kansas City: I wish to present the following resolution:

Whereas, A survey of 63 outstate Missouri hospitals in 1962 showed that, of a total of 90,192 persons discharged after care, only 929 (1 per cent) were unable to pay any of their expenses. Of the 929, only 186 (0.26 per cent of the total sampling) were age 65 or over, and

Whereas, Kerr-Mills legislation and the Vendor program are designed to provide medical care for all of the needy regardless of age, and

Whereas, Only a limited version of the Kerr-Mills Law has been implemented in Missouri, and

Whereas, The medical profession of the State of Missouri desires to provide medical care for the indigent under a plan which does not utilize the Social Security mechanism, be it

Resolved, That the House of Delegates of the Missouri State Medical Association further encourage full implementation of Kerr-Mills legislation by the legislature to the end that every citizen can obtain adequate medical care throughout the state and be it further

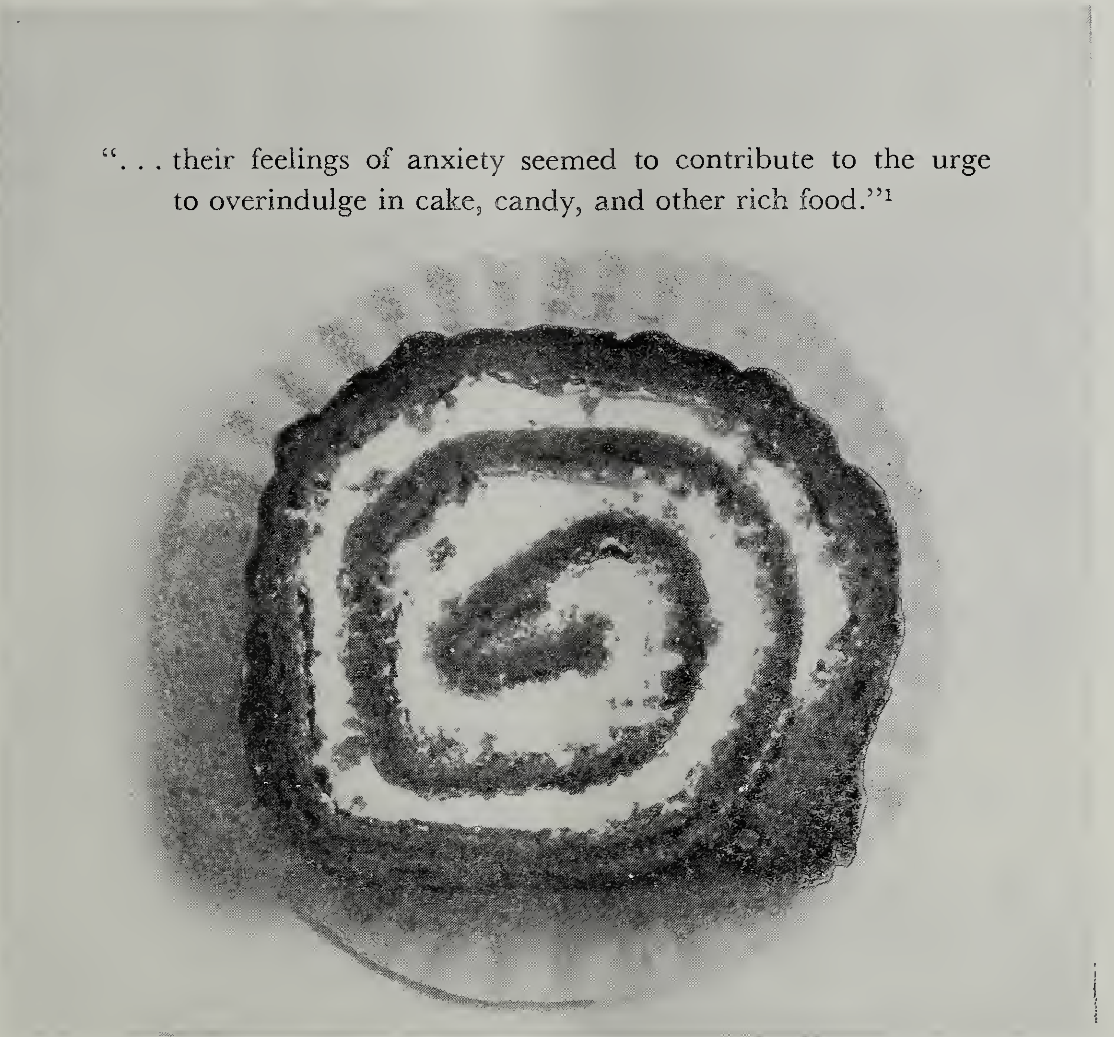
Resolved, That the House of Delegates of Missouri State Medical Association express its appreciation to the legislature of Missouri for its efforts toward implementation of the Kerr-Mills program.

The Speaker referred this resolution to the Reference Committee on Miscellaneous Affairs.

John A. Griffith, M.D., Kansas City: I wish to present the following resolution:

Whereas, Chapter XI, Section 2 (b) of the By-laws of the AMA governs the membership of the Council on Medical Education, and

Whereas, This section fails to provide any assurance of representation for the majority group of physicians involved in graduate and postgraduate education, namely those physicians



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1. Viglione, J.P.: Clin. Med. *69*:1157 (May) 1962.

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engaged primarily in the private practice of medicine but also trained, experienced and participating in graduate and post-graduate medical education programs in private community hospitals, and

Whereas, This group of physicians has decreased substantially in numbers in recent years, through the loss of many programs previously approved by the Council on Medical Education, and

Whereas, Certain policies of the Council have tended to substantially increase the cost of medical care in the United States, be it

Resolved, That the Speaker of the House of Delegates of the AMA appoint an ad hoc committee to study the actions of the Council on Medical Education and to make recommendations which may seem appropriate to remedy the apparent dissatisfaction which recent Council actions have created within the medical profession in recent years.

The Speaker referred this resolution to the Reference Committee on Medical Education and Public Welfare.

W. W. Gist, M.D., Kansas City: I wish to present the following resolution:

Whereas, The organizations established for the accreditation of hospitals provide that the medical staff include procedures within specified committees for reviewing the professional performance of members of the medical staff, and

Whereas, Certain Missouri medical societies are establishing programs for reviewing physician-patient relationships and the professional and economic relations pertaining thereto, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association sponsor legislation that will provide for the personal liability protection of any physician who may be serving in an officially designated capacity as a member of a committee of a medical hospital staff or of a county medical society, and be it further

Resolved, That statutes enacted in the states of California, Illinois and South Dakota relating to this subject be studied by the Council of the MSMA prior to the introduction of such legislation.

The Speaker referred this resolution to the Reference Committee on Resolutions.

Dr. Overholser addressed the scientific session.

Kenneth S. Nicolay, M.D., Kansas City: I wish to present the following resolution:

Whereas, A number of other state medical societies through their state insurance commission have adopted the standard insurance form to replace the multiple and varied health insurance forms now in use, be it

Resolved, That Missouri State Medical Association petition the Insurance Commission of the State of Missouri to adopt a standard health insurance form satisfactory to the Council of the Missouri State Medical Association.

The Speaker referred this resolution to the Reference Committee on Resolutions.

There being no further business, the session was adjourned.

Monday, March 9, 1964

The House of Delegates convened at 4:00 p.m. in the Khorassan Room, Hotel Chase, St. Louis, with William C. Mixson, M.D., Kansas City, Speaker, presiding.

Don C. Weir, M.D., St. Louis, reported for the Committee on Credentials as follows: There are present seven officers, nine Councilors and 124 Delegates.

On motion, duly seconded, the report was adopted.

The privilege of the floor was given Dr. Durward G. Hall, Springfield, Congressman, who interestingly discussed the situation in Congress and pointing out that the Civil Rights bill, with its long discussion, could influence the King-Anderson bill.

Dr. Leo J. Hartnett, St. Louis, reported for the Reference Committee on Reports of Officers.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS

The Reference Committee on Reports of Officers met in the Coach Room of the Chase Hotel, St. Louis, on Sunday, March 8, at 3:30 p.m. All members were present with the exception of one who was excused.

The address of the President, Dr. Kenneth Hollweg, was unanimously approved, as was the address of the President-elect, Dr. Leonard T. Furlow. The Committee wishes to extend its sympathy and good wishes on behalf of Mrs. Furlow and the Executive Secretary, Tom O'Brien, with best wishes for their recovery and good health.

The Committee wishes especially to commend the remarks of Mrs. Crispell, President of the Woman's Auxiliary, for its efforts in behalf of the Association and complimenting the Auxiliary for its efforts in behalf of the Association on the funds they have raised for the student loan funds.

The Committee also concurs with her desire and need for closer cooperation between the Auxiliary and the component medical societies.

The reports of the Secretary and Treasurer were approved as published. The budget for the year 1964 was also approved as published. The committee notes with satisfaction that there was no deficit spending and commends the Treasurer for this achievement.

The report of the Executive Secretary was unanimously approved. Mr. O'Brien and his staff, Mr. Skinner and his staff are commended for their excellent work in our program for financing medical care for elderly and for their good work on all other programs.

The Report of the Council as published was accepted and the Committee wishes to express its appreciation for its magnificent and faithful effort and excellent results.

Mr. Speaker: I move that this portion of the report be adopted.

On second, this portion of the report was accepted.

The following resolution regarding MMPAC, the Missouri Medical Political Action Committee, was submitted by the Council and amended as follows:

Whereas, Advocates of compulsory federal programs of health care are once again posing a threat to the freedom of the medical profession, and

Whereas, It has been shown conclusively that whatever need that exists for medical assistance in our nation is being met on state and local levels, particularly through the implementation of the Kerr-Mills Act, and

WHEREAS, The King-Anderson bill is not only unnecessary and would increase the tax burden of persons of all ages, but would be the first step toward federal control of health care for the entire population, and

WHEREAS, The King-Anderson bill and similar legislative proposals will be defeated only if candidates friendly to the medical profession and dedicated to the preservation of our private system of health care are elected to office, and

WHEREAS, It is imperative that the medical profession be in the forefront of the fight against federal interference with our health care system, and

WHEREAS, It is the responsibility of every physician to take an active part in this year's vital elections, and

WHEREAS, The Missouri Medical Political Action Committee has been established to make medicine's voice heard at the polls, and

WHEREAS, The most effective way for each Missouri physician to participate in political activities is through financial support of MMPAC, therefore, be it

Resolved, That the House of Delegates of the Missouri State Medical Association urges each member of the Association to join the fight against federal medicine by joining MMPAC immediately, and, likewise, urges the membership of each component society of the Association to undertake membership drives on behalf of the state medical political action committee.

The Committee took into consideration the deliberations involving the resolution concerning MMPAC, and urges all members of the medical profession to take an active part in this important organization. We recommend that this resolution, as amended, be adopted.

Mr. Speaker: I move the adoption of this portion of the report. The motion was seconded.

RALPH PERRY, M.D., Kansas City: Mr. Speaker, Members of the House:

Thank you for the opportunity to speak on behalf of the resolution in support of MMPAC. As you know, as Chairman of MMPAC, I have more than an ordinary interest in this subject.

This is much more than an "important election year"—this is the year when we doctors will either show that we are concerned enough about the threat of federal medicine to support an effective political action program—or, by failing to do this, give up any hope of combating government control over health care.

We do not have much time left. We have talked and talked—and talked—about the evils of federal medicine—but the time for just talking is over.

If we do not have enough legislators—in Congress, in our state assembly—who share our views, all the talking in the world won't save our private system of medicine.

I must tell you that this past year has been a great disappointment to all of us who feel that the Missouri Medical Political Action Committee must be the focal point of the medical profession's political action. MMPAC simply cannot function successfully unless each of you are interested in making it effective—and the way to do that is through financial support.

Politics costs money. That is a fact, and a fact we have to accept if we are going to take an active part in election campaigns. Frankly, I am not only disappointed but a little amazed at the apparent apathy among the doctors in Missouri when it comes to MMPAC.

I want you all to realize one important thing, and that is that no one is going to fight federal medicine for us. Of course, there are groups and individuals who oppose it, who work against it and who can help. But it is our profession that is under attack. It is our philosophy of health care, our tradition of private doctor-patient relationships that advocates of government medicine would destroy. We must lead the fight to preserve the freedom of our profession—no one else is going to do it for us.

We must realize what is at stake. The choice before us is really quite simple—accept our responsibility and support the fight for what we believe in, or ignore this responsibility and be mere spectators to the destruction of the finest system of health care ever known to man. There is no middle ground. Talk without action is no longer a luxury, it is irresponsibility.

I am still convinced that through a strong MMPAC we can do our job and do it well—and if I didn't have a great faith in the members of the medical profession, I wouldn't be talking to you today. Therefore, I urge you not only to pass this resolution in support of the committee, but I ask you to follow its directives and support MMPAC—with your membership dues and through your local societies.

"Adolescent Medicine" was the subject of one panel presentation.

There is a table set up at the back of the room where you can pay your 1964 MMPAC dues at the close of this meeting. Dues can also be paid by check at the Registration Desk at any time during the Session. After that, it's up to you to encourage your colleagues who are not at this meeting to make their contributions.

We can't force anyone to support MMPAC—we can only ask. But remember this: if we fail, and if the government steps into the practice of medicine, your professional freedom of choice will be lost forever. If that freedom is worth preserving, stop by the MMPAC table as you leave. Thank you.

Upon vote, the resolution was adopted.

DR. HARTNETT: I move the the adoption of the report as a whole. On second, it was voted to adopt the report as a whole.

Dr. Avery P. Rowlette, Moberly, reported for the Reference Committee on Amendments to the Constitution and By-Laws.

REPORT TO THE REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

The Reference Committee on Amendments to the Constitution and By-Laws met in the Park Room at 3:30 p.m., Chase Hotel, Sunday, March 8, 1964. The following members were present: Drs. Avery Rowlette, Chairman; Lloyd Stockwell, C. Thorpe Ray, Charles Gullick and Rae W. Froelich.

The resolution of the Jackson County Medical Society recommending a $5.00 assessment to the members of MSMA to assist in the payment of legal fees and costs occurred in litigation by the Kansas City Community Blood Bank versus the Federal Trade Commissioner, was discussed at length and the committee was rather sharply divided in its reaction. The majority of the committee opposes the principle of assessment of the members of MSMA, fearing the establishment of a precedent. The Committee recommends that the House of Delegates go on record as unanimously supporting the position of the Kansas City Community Blood Bank in the litigation and that the constitutent county societies be appealed to for voluntary contributions in active financial support of the Kansas City Community Blood Bank.

Mr. Speaker, I move the adoption of this portion of the report.

The motion was seconded.

Speaker: The motion has been made and seconded. Dr. Rowlette mentioned a minority report and that will be received.

Dr. A. Lloyd Stockwell, Kansas City, gave the minority report.

REPORT OF THE MINORITY MEMBERS OF THE REFERENCE COMMITTEE ON CONSTITUTION AND BY-LAWS

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Minority members of the Committee are in agreement with the majority except as to the majority's position in the matter of "establishment of a precedent." The problem raised in the community blood bank case is one of concern for all segments of medicine, and it appears to the minority members of this Committee that it is quite important that a "precedent," if any, be established and that the medical profession accept responsibility in this area. The minority members, two in number, therefore recommend and urge the House of Delegates to reject the majority report on this subject and to give full endorsement to the resolution as originally submitted by Jackson County Medical Society.

Dr. Stockwell moved that the minority report be substituted for the majority report. Following second, the minority report was discussed favorably by Drs. Donald H. Giesler, Osceola; David N. Kerr, St. Louis; Charles B. Wheeler, Kansas City; Allen P. Klippel, Clayton; Henry C. Allen, St. Louis, and Frank B. Matteson, Grant City.

The question being called for, on vote the minority report was accepted.

Dr. Rowlette: The Committee reviewed the Report of the Special Committee on Redistricting and noted that no changes in Councilor Districts were desired except in the Fourth Councilor District, and since a special study recommended in paragraph 3, page 3, of this report to be made by the MSMA staff had not been completed, the Committee recommends to the House of Delegates that until this study is completed that no action on change of status of the Fourth Councilor District be made at this time and this matter be presented to the 1965 House of Delegates for action.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion on vote was accepted.

Dr. Rowlette: The Committee reviewed relevant data concerning the establishment of a MSMA branch office in Jefferson City, reviewed the report of the Council Committee of MSMA, and heard discussion by members. The Committee, by a majority vote, recommends to the House of Delegates that the branch office not be established at this time.

Mr. Speaker, I move the adoption of this portion of the report.

Following second, this was discussed adversely by Drs. Howard J. McAlhany, Springfield (alternate delegate who spoke with unanimous consent of the House); Leroy J. Miller, Columbia; John I. Matthews, Jefferson City (by unanimous consent of the House), and George D. Shull, Jefferson City. Dr. David N. Kerr, St. Louis, spoke in support of the Committee recommendation.

Edwin M. Powell, M.D., Springfield: I move to table this portion of the report and refer it back to the Committee and submit in addition the following resolution:

Whereas, The contacts between government and organized medicine are becoming increasingly frequent and intimate, and

Whereas, A progressively important function of the executive staff (of MSMA) is representation of organized medicine to and before various governmental bodies and agencies, and

Whereas, Such representation would be enhanced by the residence of a member of the MSMA executive staff at the seat of government in Jefferson City, now, therefore be it

Resolved, That the Council shall make necessary budgetary preparations as required for the 1965 opening of a permanent branch office in Jefferson City, and be it further

Resolved, That the Council with the advice of the Executive Secretary, designate and/or employ a full-time member of the executive staff who shall be resident in Jefferson City as an assistant to the Executive Secretary.

The Speaker requested Dr. Powell to await New Business for the presentation of the resolution, but accepted the motion to table the portion of the report.

On second, it was voted to table that portion of the report.

Dr. Rowlette: The Committee considered the resolution introduced by the St. Louis Medical Society concerning more equitable allocation of delegates as regards reappointment and recommends to the House of Delegates that a representative committee be appointed by the President to study this problem and report at the next Annual Meeting of the House of Delegates of MSMA.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was accepted.

Dr. Rowlette: Mr. Speaker, I move the adoption of this report as refers to the second, third and fifth articles, the first as approved, the minority report, and the tabling of section four.

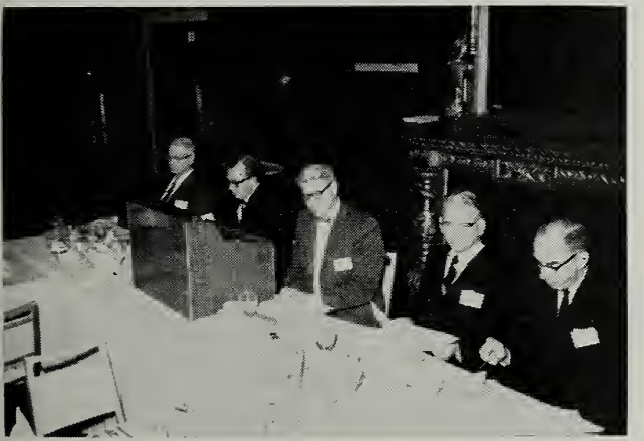
On second, this motion was adopted.

Dr. James R. McVay Jr., Kansas City, gave the report of the Reference Committee on Miscellaneous Affairs.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

The Reference Committee on Miscellaneous Affairs met in the Palladian Room, Hotel Chase, Sunday, March 8, at 4:00 p.m., with the following members present: Drs. James R. McVay Jr., Chairman, Walter Gunn, Donald Giesler, Ernest Wadlow and O. A. Carron.

The Committee approved the Public Service Committee report as it appeared in the December 7-8 Report of the Council and wishes to emphasize that portion of the report which recommended that all County Societies and Auxiliaries be enlisted in the letter writing effort to the members of the Ways and Means Committee as well as to their own representatives in opposition to the continuing efforts to pass the King-Anderson bill.



The Committee on Maternal Welfare held a luncheon meeting on Monday of the session.

The report of the Committee on Medical Economics as it appeared in the Committee Report booklet with regard to the progressive increase in health insurance protection in the State of Missouri was approved by the Committee.

The report of the Committee on Mental Health as it appeared in the Committee Report booklet was approved by the Committee.

The report of the Committee on Aging as it appeared in the Committee Report booklet was approved by the Committee.

The Committee considered the resolution presented by the Jackson County Medical Society in regard to Kerr-Mills Legislation, and approved the following resolution:

Whereas, A survey of 63 outstate Missouri Hospitals in 1962 showed that, of a total of 90,192 persons discharged after care, only 929 (1 per cent) were unable to pay any of their expenses and of the 929, only 186 (0.20 per cent of the total sampling) were age 65 or over, and

Whereas, Kerr-Mills legislation and the Vendor program are designed to provide medical care for all of the needy and near needy regardless of age, and

Whereas, Only a limited version of the Kerr-Mills Law has been implemented in Missouri, and

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Whereas, The medical profession of the State of Missouri desires to provide medical care for the needy and near needy under a plan which does not utilize the Social Security mechanism, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association further support full implementation of Kerr-Mills legislation by the legislature, to the end that every citizen can obtain adequate medical care throughout the state, and be it further

Resolved, That the House of Delegates of the Missouri State Medical Association express its appreciation to the legislature of Missouri for its continuing efforts toward implementation of the Kerr-Mills program.

Since there was no report available from the Committee on Corporate Practice, no action was taken.

On motion of Dr. McVay, duly seconded, the report was accepted.

Dr. Robert A. Mayer, St. Louis, reported for the Reference Committee on Resolutions.

REPORT OF THE REFERENCE COMMITTEE ON RESOLUTIONS

The meeting of the Reference Committee on Resolutions of the Missouri State Medical Association was held at 4:30 p.m. on Sunday, March 8, 1964, in the Colonial Room at Hotel Chase, St. Louis, with the following members present: Chairman Robert A. Mayer, Edwin M. Powell, Berneil Andrews, G. D. Shull and Robert Magee. The Committee first considered the resolution presented in regard to county society elections. The resolution as amended was approved by the Committee.

Whereas, There is a long-standing need for uniformity in the dates for election of officers by the component Societies of the Missouri State Medical Association, and

Whereas, The election of officers by said Societies prior to the first day of November would facilitate the billing and collection of dues by local officers and the state Association, and

Whereas, The early election of officers would enable duly elected delegates to the House of Delegates more effectively to study and discuss vital issues with their colleagues and Association officers in preparation for the Annual Session, and

Whereas, An annual workshop for the orientation of newly-elected presidents, secretaries and other local society officers could be planned and held prior to the beginning of their terms of office if officers were elected prior to the first day of November, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association hereby requests each component society of the Association to elect their officers in a manner prescribed by their local medical societies prior to the first day of November.

Mr. Speaker, I move the adoption of this portion of the report.

On second, the report was adopted.

Dr. Mayer: The Committee considered the resolution on "Good Samaritan" legislation and revised the resolution as follows:

Whereas, A "Good Samaritan" bill was presented to the Missouri State Legislature at its last bi-annual session and was defeated, and

Whereas, It is felt that there are many instances where doctors suffer by trying to attend patients on an emergency basis on the scene in accident cases and the like, and

Whereas, As physicians we should be free to help in these emergencies when necessary without the ever present possibility of legal action against us where action is taken, and

Whereas, It is a basic tenet of our ethics that we help all persons in distress, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association hereby strongly recommend to the Missouri State Legislature that legislation to protect the physician in the case of emergency treatment be again considered for enactment by the legislature of the State of Missouri at its next session, therefore be it

Resolved, That a copy of these resolutions be sent to all state officers concerned and to the members of the Legislature of the State of Missouri.

On motion of Dr. Mayer, duly seconded, this resolution was approved.

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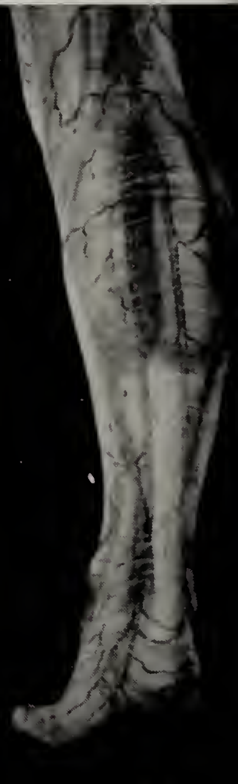

IN PERIPHERAL VASCULAR DISEASE
where ischemia causes mus
distress—pain, spasm, ach
intermittent claudication; a
coldness, numbness or
ulceration of extremities.

DR. MAYER: The following resolution was approved by the Committee:

WHEREAS, A number of other state medical societies through their state insurance commissions have adopted the standard insurance forms to replace the multiple and varied health insurance forms now in use, be it

Resolved, That Missouri State Medical Association petition the Insurance Commissioner of the State of Missouri to adopt a standard health insurance form satisfactory to the Council of the Missouri State Medical Association.

On motion of Dr. Mayer, duly seconded, this resolution was adopted.

DR. MAYER: The resolution presented by the Committee on Cancer on smoking, unanimously approved by the Committee, was approved by the reference committee.

On motion of Dr. Mayer, duly seconded, this resolution was adopted.

On motion of Dr. Mayer, duly seconded, the report was adopted in its entirety.

Dr. Hugh E. Stephenson Jr., Columbia, gave the report of the Reference Committee on Education and Public Welfare.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL EDUCATION AND PUBLIC WELFARE

The Reference Committee on Medical Education and Public Welfare met at 4:45 p.m. March 8, 1964, in the Embassy Room of the Chase-Park Plaza Hotel. The following were present: Hugh E. Stephenson Jr., Chairman, A. P. Sargent, Virgil Vandiver, William Richardson and Merrill Roller.

It is recommended that the published reports of the following standing and special committees be adopted:

1. Report of Committee on Radiology and Ionizing Radiation.
2. Report of Committee on Tuberculosis.
3. Report of Committee on Rural Medical Service.
4. Report of Committee on Civil Defense Disaster Medical Care.
5. Report of Committee on Control of Venereal Disease.
6. Report of Committee on Diabetes.
7. Report of Committee on Maternal Welfare.
8. Report of Committee on Cancer.
9. Report of Committee on Publication.
10. Report of Committee on Scientific and Postgraduate Work.
11. Report of Committee on Industrial Health.
12. Report of Committee on Eye Health.
13. Report of Committee on Infant and Child Care.

In addition, the Committee recommends approval of the Annual Report of the Missouri State Medical Foundation.

On motion of Dr. Stephenson, duly seconded, this portion of the report was accepted.

The following resolution concerning a Medical Examiner's System in the State of Missouri, proposed by Dr. Allen, was considered.

WHEREAS, The House of Delegates of the Missouri State Medical Association has previously endorsed the principle of a Medical Examiners System for the State of Missouri and

WHEREAS, A bill was introduced into the 1955 Legislature establishing a Medical Examiners System which bill died in committee and

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NER EAR
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hearing loss (sudden onset),
nnitus, and vertigo.

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Whereas, There is still a lack of scientific investigation of medical-legal deaths in most of the areas of Missouri and

Whereas, The Coroner System, as practiced in Missouri is outmoded and archaic, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association reaffirm its endorsement of the principle of a Medical Examiners System for the State of Missouri and be it further

Resolved, That the House of Delegates of the Missouri State Medical Association direct its Council to seek the introduction of a Medical Examiners Bill into the 1965 Legislature of the State of Missouri and to actively promote its passage.

The Committee approved this resolution.

On motion of Dr. Stephenson, duly seconded, this portion of the report was adopted.

Congressman Durward G. Hall addressed the House briefly.

The Committee considered a resolution concerning "personal liability protection of any physician who may be serving in an officially designated capacity as a member of a committee," which was proposed by Dr. Gist. It reads as follows:

Whereas, The organizations established for the accreditation of hospitals provide that the medical staff include procedures within specified committees for reviewing the professional performance of members of the medical staff and,

Whereas, Certain Missouri medical societies are establishing programs for reviewing physician-patient relationships and the professional and economic relations pertaining thereto, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association sponsor legislation that will provide for the personal liability protection of any physician who may be serving in an officially designated capacity as a member of a committee of a medical hospital staff or of a county medical society, and be it further

Resolved, That statutes enacted in the states of California, Illinois and South Dakota relating to this subject be studied by the Council of the MSMA prior to the introduction of such legislation.

The Committee approved this resolution.

On motion of Dr. Stephenson, duly seconded, this portion of the report was adopted.

The Committee considered a resolution concerning "outstate medically indigent tuberculosis care," proposed by Dr. Kerr.

Whereas, The disease pulmonary tuberculosis continues to be a major cause of morbidity and mortality in the State of Missouri, and

Whereas, State facilities for the care of such patients who are unable to afford private care is confined at present to one institution, and

Whereas, There are certain city facilities in the State of Missouri who provide care for city residents and could be made available for care of state residents on payment of adequate expenses by the state for such care, therefore be it

Resolved, The House of Delegates go on record as strongly recommending to the Missouri State Legislature that it reconsider bills presented to it at the last session which were not voted upon, and be it further

Resolved, That the Missouri State Legislature be urged to pass necessary legislation providing for adequate reimbursement of city facilities for the care of medically indigent tubercular patients in out-state Missouri, and further be it

Resolved, That copies of the resolution be sent to the State Tuberculosis Society, the Tuberculosis and Health Association of St. Louis, Kansas City and any other organizations interested in the care of tuberculosis and that copies be sent to state officials concerned and to members of the legislature including candidates who will be running in the next election.

The Committee disapproved this resolution.

Following discussion, on motion, duly seconded, the report of the Committee was not accepted.

Speaker: This means that the resolution is still in Committee and will be reported on further at the next session of the House.

Dr. Stephenson: The Committee considered a resolution concerning the exclusion of radiology service in Blue Cross contacts proposed by Dr. Weir, as follows:

Whereas, The American Medical Association has established and repeatedly reaffirmed the principle that, as the practice of radiology constitutes the practice of medicine, benefits for these services should be included in medical insurance contracts, and should not be included in hospitalization insurance contracts and

Whereas, The House of Delegates of the American Medical Association in session November, 1960, passed Resolution No. 27 which in its last paragraph states, "Resolved, That the American Medical Association urge all constituent associations to take such action as may be deemed necessary to effect the transfer of professional services from Blue Cross Plans and all other hospitalization plans into Blue Shield or that section of insurance plans providing for professional services, wherever such situations exist," and

Whereas, The House of Delegates of the Missouri State Medical Association has protested the inclusion of benefits for these medical services in Blue Cross contracts and recommended their coverage under Blue Shield contracts and

Whereas, At the present time there are some benefits for both diagnostic and therapeutic radiology included in Blue Cross contracts, and

Whereas, The Group Hospital Service, Incorporated (Blue Cross) and its member hospitals are negotiating a revised contract which involves the medical practice of radiology, which is to be included under the hospitalization protection program, therefore be it

Resolved, That the Missouri State Medical Association reaffirm its opposition to any contract or expansion of coverage of any professional medical services between Blue Cross and its member hospitals which would involve the practice of radiology.

The Committee approved this resolution.

On motion of Dr. Stephenson, duly seconded, this portion of the report was adopted.

The Committee considered a resolution concerning the exclusion of pathology service in Blue Cross contracts proposed by Dr. Wheeler.

Whereas, The American Medical Association has established and repeatedly reaffirmed the principle that, as the practice of pathology constitutes the practice of medicine, benefits for these services should be included in medical insurance contracts, and should not be included in hospitalization insurance contracts and

Whereas, The House of Delegates of the American Medical Association in session November, 1960, passed Resolution No. 27 which in its last paragraph states, "Resolved, That the American Medical Association urge all constituent associations to take such action as may be deemed necessary to effect the transfer of professional services from Blue Cross Plans and all other hospitalization plans into Blue Shield or that section of insurance plans providing for professional services, wherever such situations exist," and

Whereas, The House of Delegates of the Missouri State Medical Association has previously protested the inclusion of these medical services in Blue Cross contracts and recommended their coverage under Blue Shield contracts, and

Whereas, It is the understanding that Group Hospital Service, Inc. (Blue Cross) and a committee of its member hospitals are negotiating a contract which involves the medical services of pathology, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association reaffirm its opposition to any contract between Blue Cross and its member hospitals which would involve the practice of pathology or any other branch of the practice of medicine as performed in a hospital, and be it further

Resolved, That a copy of this resolution be forwarded to Group Hospital Service, Inc., the Hospital Association of Greater St. Louis, Missouri Medical Service, Inc., and the Missouri Hospital Association.

The Committee approved this resolution.

Mr. Chairman, I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee next considered a resolution introduced by Dr. Kitchen, concerning representation on the Council of Medical Education of the AMA.

WHEREAS, Resolution No. 6, submitted by the Missouri delegation at the 111th Annual Session of the American Medical Association in Chicago, 1962, would have changed the make-up of the Council on Medical Education and Hospitals, and

WHEREAS, The Board of Trustees in Atlantic City, June, 1963, accepted only one sentence from the 1962 Reference Committee's report—namely, "That in the selection of all individuals as nominees for election to Council membership, deliberate care shall be exercised to assure that those selected understand and are sympathetic to the medical needs of the public" and

WHEREAS, The 1963 recommendations of the Board of Trustees was replaced by a Reference Committee's report which would amend the By-laws in a manner far different than that intended by the original 1962 Missouri resolution, and

WHEREAS, The Council on Medical Education has continued to function in a manner which has failed to satisfy many conscientious physicians who are concerned with graduate and postgraduate medical education programs in private community hospitals and with the preservation of traditional medical preceptorship, therefore be it

Resolved, That the Reference Committee on Amendments to Constitution and By-laws at the next annual session of the AMA be requested by the Delegates of the MSMA to seriously consider a By-laws provision which would remedy the appalling lack of representation on the Council of Medical Education of physicians engaged primarily in the private practice of medicine but also trained, experienced and participating in graduate and postgraduate medical education programs in private community hospitals, and be it further

Resolved, That copies of this resolution be sent to all officers and members of the House of Delegates of the AMA together with any material which the Missouri Delegates to the AMA consider necessary to support this resolution.

The Committee voted to turn this resolution over to the Council for their consideration.

Mr. Chairman, I move the adoption of this portion of the report.

On second, this portion of the report was adopted.

The Committee on Control of Venereal Disease reported on a meeting held during the year.

Finally, the Committee considered a resolution urging the establishment of a fact-finding ad hoc Committee of the AMA to concern itself with actions of the Council on Medical Education. The resolution was proposed by Dr. Griffith.

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WHEREAS, Chapter XI, Section 2 (b) of the By-laws of the AMA governs the membership of the Council on Medical Education, and

WHEREAS, This section fails to provide any assurance of representation for the majority group of physicians involved in graduate and postgraduate education, namely those physicians engaged primarily in the private practice of medicine but also trained, experienced and participating in graduate and postgraduate medical education programs in private community hospitals, and

WHEREAS, This group of physicians has decreased substantially in numbers in recent years, through the loss of many programs previously approved by the Council on Medical Education, and

WHEREAS, Certain policies of the Council have tended to substantially increase the cost of medical care in the United States, be it

Resolved, That the Speaker of the House of Delegates of the AMA appoint an ad hoc committee to study the actions of the Council on Medical Education and to make recommendations which may seem appropriate to remedy the apparent dissatisfaction which recent Council actions have created within the medical profession in recent years.

The Committee approved this resolution.

Mr. Chairman, I move the adoption of this last portion of the Committee's report. On second, this portion of the report was adopted.

Mr. Chairman, I move adoption of the report as a whole, as amended.

On second, the report as a whole was adopted, as amended.

The 50 Year Club met during the session.

Dr. Paul T. Luckenbill, Plattsburg, presented the following resolution from the Reference Commitee on Necrology:

WHEREAS, Eighty-seven of our members have died since the last Annual Session, among them a Past President of the Association, Dr. Carl F. Vohs, St. Louis, and

WHEREAS, Each deceased member is a loss to the Association and to his close colleagues and causes grief to both, and

WHEREAS, Condolences have been sent to the family of each deceased member, therefore be it

Resolved, That condolences continue to be sent to each family of a deceased member, and be it further

Resolved, That the House of Delegates stand for a moment in memory of those who have been lost and whose names will appear in the minutes of this Annual Session.

On motion of Dr. Luckenbill, duly seconded, the resolution was adopted and the Speaker asked that the Delegates stand.

Members Deceased Since the 1963 Session

Parkhurst, Charles L., M.D., Houstonia
Blanke, Otto T., M.D., Joplin
Schaerrer, Hans, M.D., Kansas City
Hooper, Robert N., M.D., Shawnee Mission, Kansas
Baird, J. Edward, M.D., Excelsior Springs
Costello, Joseph P., M.D., St. Louis
Farris, William W., M.D., St. Louis
McHale, Thomas C., M.D., Kansas City
Schneider, Vincent A., M.D., St. Peters
Cannon, W. Joseph, M.D., Ladue
Zeitler, William T., M.D., St. Louis
Landree, James C., M.D., St. Louis
Hutton, Joseph L., M.D., St. Louis
Hite, Henry A., M.D., Greenridge
Grybinas, Vytautas J., M.D., Belleville, Ill.
Loewy, Louise B., M.D., Kansas City
Johns, George A., M.D., Pikesville, Md.
Schnoebelen, Paul C., M.D., St. Louis
Casford, Ralph S., M.D., Kansas City
Ketron, Marvin B., M.D., Kansas City
Stone, Charles A., M.D., Calverton Park
Price, Robert P., M.D., St. Joseph
Smith, William A., M.D., Somerton, Ariz.
Chiarottino, Joseph H., M.D., St. Joseph
Marshall, Wilbur J., M.D., Springfield
Belot, Monti L., M.D., Parkville
Westrup, Arthur W., M.D., St. Louis
Clancy, Joseph Jr., M.D., Osceola
Payne, Bryan T., M.D., Lexington
Simon, Selig, M.D., St. Louis
Dorris, Richard P., M.D., Jefferson City
Rinkel, Herbert J., M.D., Shawnee Mission, Kansas
James, William M., M.D., St. Louis
Callaway, Luther M., M.D., Kansas City
Getelson, Joseph, M.D., Kansas City
Birdsall, Thomas C., M.D., St. Louis
Krebs, Otto S., M.D., St. Louis
Moore, Sherwood, M.D., Rock Hill
Clay, Hampson S., M.D., Poplar Bluff
Freeman, Hal E., M.D., Springfield
Hassett, Henry, M.D., St. Louis
Hrdlicka, Victor E., M.D., Clayton
Macko, Joseph R., M.D., St. Louis
Simpson, Lloyd, M.D., Columbia
Kirk, Charles W., M.D., Hopkins
McAlester, Andrew W. III, M.D., Brownsville, Texas
Skinner, John O., M.D., Kansas City
Manting, George, M.D., University City
Williams, Edward B. Jr., M.D., Richmond Heights
Mendonsa, Elsa L., M.D., University City
Demko, Frank, M.D., Pevely
Vohs, Carl F., M.D., St. Louis
Goodson, William H., M.D., Liberty
Smith, William J., M.D., Hannibal
McCarthy, Eugene F., M.D., St. Louis
Potter, Allen B., M.D., Bowling Green
Mudd, James L., M.D., St. Louis
Zentay, Paul J., M.D., St. Louis
Peckham, John W., M.D., Webster Groves
Brown, W. Sidney, M.D., University City
Kohn, Cecil M., M.D., Kansas City
Haynes, Lee, M.D., Kansas City
Shutt, Cleveland S., M.D., St. Louis
Morris, Clyde S., M.D., Caruthersville
Koenig, Karl F., M.D., St. Louis
Meisenbach, A. Edward, M.D., St. Louis
Shrout, Cecil B., M.D., Bunceton
Barker, Jesse W., M.D., St. Louis
Burford, E. Humber, M.D., Ladue
Clark, J. F. W., M.D., University City
Dickson, Frank D., M.D., Kansas City
Gibbons, Edward H., M.D., St. Louis

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Munsch, Augustus P., M.D., St. Louis
Northup, Glenn R., M.D., St. Louis
Richardson, Reginald G., M.D., Jefferson City
Seeley, J. Bradford, M.D., Independence
Biggs, James B., M.D., Bowling Green
Blache, J. Owen, M.D., St. Louis
Tribble, Robert E., M.D., Chaffee
O'Brien, Leo A., M.D., Kansas City
Koenig, George H., M.D., St. Petersburg, Fla.
Spitzer, Ernest, M.D., St. Louis
Doubek, John C. Sr., M.D., St. Louis
Riley, Ralph D., M.D., St. Louis
Greaves, Eli A., M.D., Kansas City
Powell, Carl A., M.D., St. Louis
Kelley, Isaac Dee, M.D., St. Louis

Edwin M. Powell, M.D., Springfield: I wish to present the following resolution:

Whereas, The contacts between government and organized medicine are becoming increasingly frequent and intimate, and
Whereas, A progressively important function of the executive staff (of MSMA) is representation of organized medicine to and before various governmental bodies and agencies, and
Whereas, Such representation would be enhanced by the residence of a member of the MSMA executive staff at the seat of government in Jefferson City, now therefore be it
Resolved, That the Council shall make necessary budgetary preparations as required for the 1965 opening of a permanent branch office in Jefferson City, and be it further
Resolved, That the Council with the advice of the Executive Secretary, designate and/or employ a full time member of the executive staff who shall be resident in Jefferson City as an assistant to the Executive Secretary.

The Speaker referred this resolution to the Reference Committee on Constitution and By-Laws.

John L. Barnard Jr., M.D., Kansas City: I wish to present the following resolution:

Whereas, The medical profession of the State of Missouri has always been indebted to the City of St. Louis and physicians of the St. Louis area for the warm hospitality shown to members of the MSMA every two years, and
Whereas, This year's meeting of the MSMA coincides with the bicentennial celebration of the great sovereign City of St. Louis, be it
Resolved, That the House of Delegates of the MSMA express its appreciation for this and past conventions and congratulate the Mayor and the City Council of S. Louis on the occasion of the bicentennial celebration.

The Speaker referred this resolution to the Reference Committee on Amendments to the Constitution and By-Laws.

Associate memberships in the Missouri University Medical Alumni organization were presented at the M. U. luncheon.

Claude W. Cooper, M.D., Thayer: I wish to present a resolution for consideration of the House from the members of the 50 Year Club.

Interest in the past has been shown by Missouri medicine relative to the establishment of a home, club or lodge for incapacitated, debilitated and retired doctors of medicine and their families.
As time marches on some members of the MSMA who are now members of the 50 Year Club of Missouri and AMA feel that there should be a rekindling of interest and enthusiasm for such a "home."
Many organizations as labor unions, fraternal and church organizations have more than shown advantages of such homes.
This move can and should be one of economy, provide comfort and well-being for those needing such care and provide conditions under which professional men and their families could be associated with those of like social and professional standing.
This "home" should be largely self-sustaining.
Resolved, That the members of the Missouri State Medical Association initiate a program leading to a "Home" for members of the medical profession who are incapacitated and/or retired, and be it further
Resolved, That the Delegates of the MSMA to the AMA at its Annual or Clinical Session request the interest and support of the AMA for such a National Home.

The Speaker referred this resolution to the Reference Committee on Amendments to the Constitution and By-Laws.

There being no further business, the second session of the House of Delegates adjourned.

Wednesday, March 11, 1964

The House of Delegates was called to order by the Speaker, William C. Mixson, M.D., Kansas City, in the Chase Club, Hotel Chase, St. Louis, following breakfast.

Don C. Weir, M.D., St. Louis, reported for the Committee on Credentials as follows: There are present 124 Delegates, seven officers and nine Councilors.

On motion, duly seconded, the report was accepted.

On motion, duly seconded, the report of the Committee on Credentials was accepted as a roll call.

On motion, duly seconded, the reading of the minutes was dispensed with.

Dr. Avery P. Rowlette, Moberly, gave the report of the Reference Committee on Amendments to the Constitution and By-Laws.

REPORT OF THE REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

The Reference Committee on Amendments to the Constitution and By-Laws met in the Regency Room of the Chase Hotel at 4:00 p.m. March 10 with Chairman Avery Rowlette, Lloyd Stockwell, C. Thorpe Ray, Charles Gulick and Rae W. Froelich present.

The resolution of congratulations to the City of St. Louis upon the occasion of its bicentennial celebration was approved and the Committee recommends its adoption to the House of Delegates.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was accepted.

A resolution recommending the MSMA delegates to the AMA at its annual or clinical session requesting the interest and support of the AMA for a national home for aged physicians was approved by the Committee.

TWO
FOR THE
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TABLE...

Both the Cream and Ointment rarely sensitize and are bactericidal to virtually all gram-positive and gram-negative organisms found topically, including Pseudomonas aeruginosa and Staphylococcus aureus.

Indications: Wherever infection occurs and is accessible for topical therapy.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

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Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Gramicidin 0.25 mg.

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, distilled water, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax and 0.25% methylparaben as preservative.

*U.S. Patent Nos. 2,565,057-2,695,261

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POLYMYXIN B / BACITRACIN / NEOMYCIN
ANTIBIOTIC OINTMENT

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base).

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Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was accepted.

The Committee considered the resolution regarding a branch office in Jefferson City and recognizing the persistent agitation over the years for representation of organized medicine in the state capitol, and the presence of instructed delegations for the proposals at this meeting, and feeling that grass roots sentiment should be obtained, recommends that the resolution be referred back to the Council for further study and recommends that the Council ask each component society to send an instructed delegation to the 1965 House of Delegates prepared to express the sentiment of that society as regards:

1. Maintenance of the status quo.
2. Maintenance of the central office of MSMA in St. Louis and the establishment of a branch office at Jefferson City.
3. Removal of the central office from St. Louis to Jefferson City.

In this manner the Committee felt a realistic cost appraisal of each proposal, an evaluation of effective action both as regards legislation, liaison and efficient operation of the state headquarters might be made to the membership before any action is taken by the House of Delegates.

Mr. Speaker, I move the adoption of this portion of the report.

On second, this portion of the report was accepted.

On motion of Dr. Rowlette, duly seconded, the report as a whole was accepted.

Dr. Hugh E. Stephenson Jr., Columbia, reported for the Reference Committee on Medical Education and Public Welfare.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL EDUCATION AND PUBLIC WELFARE

The Reference Committee on Medical Education and Public Welfare met at 10:30 a.m., in the Palladian Room, of the Chase-Park Plaza Hotel. The following members of the Committee were present: Drs. Hugh E. Stephenson, Chairman; A. J. Sargent, Virgil Vandiver and Merrill Roller.

The Committee considered the previously introduced resolution on the care of medically indigent out-state tubercular patients. After receiving testimony from proponents and opponents of the resolution, the Committee, in executive session, voted unanimously to disapprove the resolution as read as well as suggested amendments to the resolution and wishes to recommend that the overall problem of out-state medically indigent tubercular care be further studied by the standing Committee on Tuberculosis of the Missouri State Medical Association.

Mr. Speaker, I move the adoption of the report.

On second, the report was adopted.

Dr. Philip L. Byers, Kansas City, reported for the Nominating Committee.

REPORT OF THE COMMITTEE ON NOMINATIONS

For Vice Presidents: Ben M. Bull, M.D., Ironton; Ralph E. Duncan, M.D., Kansas City; Edgar W. Davis, M.D., St. Louis.

There being no nominations from the floor, on motion, duly seconded, these officers were elected.

For Delegates to the AMA for a term beginning Jan. 1, 1965, Durward G. Hall, M.D., Springfield, and J. Loren Washburn, M.D., Versailles, with J. H. Summers, M.D., Lebanon, and Thompson E. Potter, M.D., St. Joseph, alternates; Dr. Hugh E. Stephenson Jr., Columbia, to serve the one year unexpired term of Rolla B. Wray, M.D., Nevada, as alternate.

There being no nominations from the floor, on motion, duly seconded, these officers were elected.

For Speaker of the House of Delegates, Stanley S. Peterson, M.D., Springfield; Vice Speaker, Paul Max, M.D., St. Louis.

There being no nominations from the floor, on motion, duly seconded, these officers were declared elected.

Upon motion, duly seconded, the report of the Committee on Nominations was accepted.

Dr. Edgar Davis, St. Louis County, nominated Dr. Whitener for President-Elect.

Dr. Edgar W. Davis, St. Louis, following a nominating speech, nominated Paul R. Whitener, M.D., St. Louis, for President-Elect. The motion was seconded.

Dr. Alfred W. Eklund, Pleasant Hill, following a nominating speech, nominated O. B. Barger, M.D., Harrisonville, for President-Elect. The motion was seconded.

It was moved, seconded and voted that the nominations close.

On motion, duly seconded, a written ballot was approved.

The Speaker appointed Carter W. Luter, M.D., Butler; James R. Nakada, St. Louis County, and Berneil W. Andrews, M.D., Kansas City, as tellers.

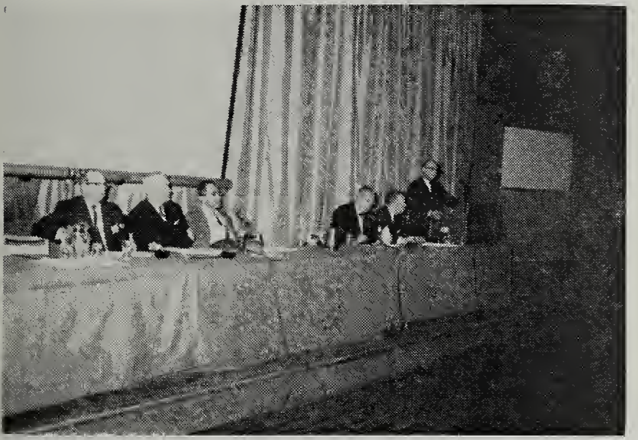
Ballots were distributed and the roll of Delegates was read by the Secretary, Dr. J. I. Matthews, Jefferson City, and Delegates brought their ballots to a ballot box as their names were read.

The Speaker asked that the appointments to standing and special committees be given while the tellers were counting the votes.

Leonard T. Furlow, M.D., St. Louis, read the appointments to committees to fill expired terms and chairmenships, which were approved by the House of Delegates.

COMMITTEE APPOINTMENTS 1964

Scientific and Postgraduate Work—John I. Matthews, Jefferson City, Chairman; Richard Yore, St. Louis; Peter G. Danis, St. Louis. Associate Members: Richard O. Craig, St. Joseph; John J. Modlin, Columbia; Paul Rother, St. Charles; R. A. Slickman, Kansas City; Edward D. Kinsella, St. Louis; Roy Pearse, Nevada; John B. Shapleigh, St. Louis.



The problem of hospital costs was discussed by a panel.

Defense—W. W. Gist, Kansas City, Chairman; Wilbur P. McDonald, St. Joseph; Harold W. Miller, Willow Springs.

Medical Education and Hospitals—William A. Knight Jr., St. Louis, Chairman; Vernon E. Wilson, Columbia; Carl Lischer, St. Louis. Associate Member: Virgil Jeans, Joplin.

Cancer—John E. Lamy, Sedalia, Chairman; E. J. Schewe, Columbia. Associate Members: Harvey R. Butcher Jr., St. Louis; H. C. Stricker, Jefferson City; Fred B. Coller, Springfield; G. Neil Berry, Kansas City.

Medical Economics—John R. Forgrave, St. Joseph, Chairman; Rae W. Froelich, Lebanon. Associate Members: Kenneth E. Knabb, Springfield; Donald Giesler, Osceola; Chester L. Clark, Trenton; Crofford O. Vermillion, St. Louis.

Mental Health—George W. Forman, St. Joseph, Chairman; James N. Haddock, St. Louis; Henry V. Guhleman, Jefferson City; Robert D. Brookes, St. Louis; D. R. Edwards, Sedalia; William F. Clary, Springfield; Paul L. Barone, Nevada; Edward T. Auer, St. Louis; Robert S. Terrill, Kansas City; George J. Lytton, Kansas City.

Maternal Welfare—A. C. Trueblood, Clayton, Chairman; James E. Keeler, Kansas City. Associate Members: C. G. Stauffacher, Sedalia; J. J. Wimp, Kirksville; MacDonald Bonebrake, Springfield; E. E. Wadlow, St. Joseph; Paul E. Kratz, Cape Girardeau; Lyman D. Brown, Springfield; Eugene G. Hamilton, St. Louis; Robert S. Brown, Kansas City; Seymour Monat, St. Louis; Leonard A. Wall, Kansas City.

Infant and Child Care—James A. Kinder, Cape Girardeau, Chairman; E. J. Schwartz, Springfield; James K. Mann, Hannibal; H. E. Petersen, St. Joseph; R. J. LaDriere, St. Louis; Guy N. Magness, University City; Ray B. Lewis, Columbia; James J. Pascoe, Nevada; Jack N. Wiles, West Plains; Gerald Hughes, Kansas City. Associate Members: C. Read Boles, Clayton; Ben H. Koon, Bolivar; Ernest L. Glasscock, Kansas City.

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Constitution and By-Laws—W. A. Bloom, Fayette, Chairman; Donald M. Dowell, Chillicothe; R. O. Muether, St. Louis.

Trauma—Richard E. Lord, St. Louis, Chairman; Glenn McElroy, Columbia. Associate Members: Howard J. McAlhaney, Springfield; Carl M. Peterson, Kansas City; Otis E. James, Kansas City; James O. Lottes, St. Louis.

Eye Health—John McLeod, Kansas City, Chairman; Flavius G. Pernoud, St. Louis; Paul M. Beck, St. Joseph; John A. Buesseler, Columbia. Associate Members: Dick H. Underwood, Kansas City; S. Albert Hanser, St. Louis; D. E. Eggleston, Macon; John D. Maddox, Joplin; George Mandler, Chillicothe; James H. Bryan, Clayton; Bill G. Prater, Springfield.

Laboratory Medicine—Charles B. Wheeler, Kansas City, Chairman; James G. Bridgens, Kansas City.

Industrial Health—S. W. Scorse, Joplin, Chairman; Paul J. Centner, Kansas City; William L. Macon, St. Louis. Associate Members: James W. Clawson, Springfield; Van W. Taylor, Bonne Terre; C. Rush McAdam, St. Louis.

Diabetes—Harold K. Roberts, St. Louis, Chairman; H. E. Oppenheimer, Clayton; Thomas W. Burns, Columbia; John K. Caldwell, Kansas City. Associate Members: William H. Olmsted, St. Louis; Harold H. Lurie, Springfield; Edward S. Jones, Harrisonville; Charles F. Wilson, Cape Girardeau; William J. Glass Jr., Monett; J. Will Fleming, Moberly.

Anesthesiology—W. W. Tillman, Springfield, Chairman; E. Helen Hash, Kansas City; Kenneth K. Keown, Columbia. Associate Members: George Weeks, Cape Girardeau; Robert B. Dodd, St. Louis; Edwin E. Bowe, Jefferson City.

Control of Venereal Disease—Edwin M. Powell, Springfield, Chairman; A. E. Belden, Jefferson City; A. W. Neilson, St. Louis. Associate Member: M. Richard Carlin, St. Louis.

Physical Medicine and Rehabilitation—Edward Shires, Kansas City, Chairman; Earl P. Holt Jr., St. Louis. Associate Members: John W. Deyton, St. Louis; Lester Wolcott, Columbia; Nicholas S. Pickard, Kansas City.

Civil Defense Disaster Medical Care—Carl D. Siegel, Sedalia, Chairman; John T. Crowe, Cape Girardeau; H. D. Steinbeck, Union; Carroll P. Hungate, Kansas City; William F. Bell, Lee's Summit; John H. Walterscheid, Hannibal; Curtis H. Lohr, Clayton; R. Ned White, Springfield; George E. Thoma, St. Louis; George L. Watkins, Farmington; O. P. Hampton, St. Louis; J. S. Sanders, Jefferson City; John L. Mothershead, St. Joseph; Robert R. Donley, Monett.

Aging—Stanley S. Peterson, Springfield, Chairman; Robert C. Kingsland, Clayton. Associate Members: Robert H. Tanner, Jefferson City; John A. Griffith, Kansas City; John W. Daake, St. Louis; Robert B. Bassett, St. Louis; J. H. Summers, Lebanon; William C. Critchlow, Sikeston.

Radiology and Ionizing Radiation—Mark D. Eagleton, Clayton, Chairman; Gwilym S. Lodwick, Columbia; J. Stewart Whitmore, Kansas City. Associate Members: Wayne K. Tice, Independence; William E. Allen Jr., St. Louis; Wayne A. Simril, Clayton.

Tuberculosis—F. E. MacInnis, Kansas City, Chairman; Paul Murphy, St. Louis; H. M. Roberts, Kansas City; Joseph L. Lucido, St. Louis; Walter C. Gray, St. Louis; David N. Kerr, St. Louis; John W. Polk, Springfield; Sheldon Beecher, Poplar Bluff; Judson I. Chalkley, Columbia.

Study of Cardiac Disease—James G. Janney, St. Louis, Chairman; Earl L. Loyd, Jefferson City; William I. Park, Springfield; William J. Shaw Sr., Fayette; Jack M. Martt, Columbia; Robert Mosser, Independence; William J. Gillespie, St. Louis; Caryl A. Potter, St. Joseph; F. J. Biggs, Poplar Bluff; Joseph C. Edwards, St. Louis; Thomas H. Burford, St. Louis; J. Tenbrook King, Kansas City.

Rural Medical Service—B. J. Bass, Salem, Chairman; J. Marshall Jung, Illmo; James H. Sweiger, Maysville; K. S. Latham, California; H. F. Hoelscher, Warrenton; James E. Campbell, Macon; Charles A. Worley, Sweet Springs; A. J. Graves, Mount Vernon.

Public Service—Hector W. Benoit Jr., Kansas City, Chairman; Paul R. Whitener, St. Louis; Armand Brodeur, St. Louis; Fred L. Wommack, Crane; Leonard T. Furlow, St. Louis.

Dr. Luter announced that Dr. Paul R. Whitener, St. Louis County, had been elected President-Elect. Dr. Whitener was escorted to the platform and spoke briefly in acceptance.

Dr. Whitener addressed the House briefly.

The following election of Councilors was reported by Dr. John I. Matthews, Jefferson City: First District, Joseph L. Fisher, M.D., St. Joseph; Third District, David N. Kerr, M.D., St. Louis; Fifth District, Byron M. Stuart, M.D., Boonville; Seventh District, Hector W. Benoit Jr., M.D., Kansas City; Ninth District, E. A. Stricker, M.D., St. James.

A standing vote of appreciation was given for William C. Mixson, M.D., Kansas City, for his work as Speaker of the House of Delegates during the last three years.

David N. Kerr, M.D., St. Louis, asked for the unanimous consent of the House to present a resolution to invite the AMA to meet in St. Louis for an interim session. Consent was given.

Whereas, The historical ties between the American Medical Association and the Missouri State Medical Association have been in continuity from 1860,

Whereas, The Missouri State Medical Association has handled six former American Medical Association meetings in St. Louis with credit at intervals of 17 years and it has been 25 years since the AMA convened in St. Louis in 1939,

Whereas, St. Louis, Missouri, is conveniently located and has excellent facilities and entertainment features for the large and esteemed contingent of physicians who would attend an interim session of the American Medical Association, therefore be it

Resolved, That the Missouri State Medical Association respect-

New officers of the Association were installed by the Secretary, Dr. Matthews.

fully invites the American Medical Association to hold an interim session in St. Louis, Missouri, on the earliest available date.

On motion, duly seconded, the resolution was adopted.

The newly elected officers of the Association were installed by Dr. John I. Matthews, Jefferson City, Secretary.

Ralph Perry, M.D., Kansas City, invited the Association to meet in Kansas City in 1965. On motion, duly seconded, the invitation was accepted.

There being no further business the session was adjourned.

Chase Park Plaza
HOTEL

Newly elected Speaker of the House of Delegates adjourns the session.

THE COUNCIL

Hotel Chase—St. Louis
March 8, 1964

The Council met at 9:00 a.m., March 8, at Hotel Chase, St. Louis, with Byron M. Stuart, M.D., Boonville, Chairman, presiding. Those present were Drs. Stuart;

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clear
drink
7up
YOU LIKE IT IT LIKES YOU
has a
crystal-
clear
label
SEVEN-UP
YOU LIKE IT IT LIKES YOU
CONTAINS
CARBONATED WATER. SUGAR
CITRIC ACID. SODIUM CITRATE
FLAVOR DERIVED FROM LEMON
AND LIME OILS.
"Fresh Up" WITH 7up
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Pour chilled, sparkling 7-Up, and you can't fail to notice how clear it is. Read the 7-Up label. Its message comes through the same way. A clear statement of quality.

Seven-Up lists all its ingredients right on the bottle. We want you to know exactly what goes into this refreshing soft drink. How pure it is. How wholesome.

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Next time you want a fresh, clean taste, "fresh up" with 7-Up.

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Joplin	Blytheville, Ark.
North Kansas City	Fayetteville, Ark.
Moberly	Paragould, Ark.
St. Joseph	Cedar Rapids, Ia.

Shenandoah, Ia.

Joseph L. Fisher, St. Joseph; James M. Macnish, St. Louis; Paul R. Whitener, St. Louis; O. B. Barger, Harrisonville; Hector W. Benoit Jr., Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Leonard T. Furlow, St. Louis; Charles R. Doyle, St. Louis; William C. Mixson, Kansas City; A. W. Neilson, St. Louis; H. E. Petersen, St. Joseph; Vernon E. Wilson, Columbia; H. M. Hardwicke, Jefferson City; William D. Mayer, Columbia; Messrs. John W. Noble, Kennett; Jordan Singleton, Lemoine Skinner, Ray McIntyre, St. Louis; A. D. Smith, Kansas City; Misses Peggy Heilig and Helen Penn, St. Louis.

SOCIETY ELECTION OF OFFICERS

The following resolution was considered by the Council:

Whereas, There is a long-standing need for uniformity in the dates for election of officers by the component societies of the Missouri State Medical Association, and

Whereas, The election of officers by said Societies during the month of October would facilitate the billing and collection of dues by local officers and the state Association, and

Whereas, The early election of officers would enable duly elected delegates to the House of Delegates more effectively to study and discuss vital issues with their colleagues and association officers in preparation for the Annual Session, and

Whereas, An annual workshop for the orientation of newly elected presidents, secretaries and other local society officers could be planned and held prior to the beginning of their terms of office if officers were elected in October, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association hereby requests and urges each component society of the Association to elect their officers at a meeting during the month of October, beginning in October, 1964.

On motion of Dr. Furlow, duly seconded, it was voted to present this resolution to the House of Delegates.

The University of Missouri Medical Alumni held a luncheon meeting.

MMPAC

The following resolution was considered by the Council:

Whereas, Advocates of compulsory Federal programs of health care are once again posing a threat to the freedom of the medical profession, and

Whereas, It has been shown conclusively that whatever need that exists for medical assistance in our nation is being met on state and local levels, particularly through the implementation of the Kerr-Mills Act, and

Whereas, The King-Anderson bill is not only unnecessary and would increase the tax burden of persons of all ages, but would be the first step toward Federal control of health care for the entire population, and

Whereas, The King-Anderson bill and similar legislative proposals will be defeated only if candidates friendly to the medical profession and dedicated to the preservation of our private system of health care are elected to office, and

Whereas, It is imperative that the medical profession be in the forefront of the fight against Federal interference with our health care system, and

Whereas, It is the responsibility of every physician to take an active part in this year's vital elections, and

Whereas, The Missouri Medical Political Action Committee has been established to make medicine's voice heard at the polls, and

Whereas, The most effective way for each Missouri physician to participate in political activities is through financial support of MMPAC, therefore, be it

Resolved, That the House of Delegates of the Missouri State Medical Association urges each member of the association to join the fight against Federal medicine by joining MMPAC immediately, and, likewise, urges each component society of the Association to undertake membership drives on behalf of the state medical political action committee.

On motion of Dr. Furlow, duly seconded, it was voted to present this resolution to the House of Delegates.

MENTAL HEALTH

It was pointed out that late in 1963 federal monies were made available to the states for several phases of mental health and that a state executive committee for planning a mental health program for Missouri had been appointed by the Governor. Subcommittees will work under the executive committee and it was suggested that Dr. Furlow and Dr. Hardwicke consult together in appointing such a committee. It was stated that probably the first actions would be on retardation, then on community health clinics.

AMA

Dr. Neilson spoke concerning future officers from Missouri for the AMA and said that when the time came to work toward this, help would be needed from the Council.

TOM O'BRIEN

On motion of Dr. Furlow, duly seconded, it was voted to send a message of well wishes to Tom O'Brien. Sympathy was expressed over Mrs. Furlow's illness and to Mrs. Hollweg on the death of her mother.

BLOOD BANK ASSESSMENT

The following resolution from the Jackson County Medical Society was presented by Dr. Benoit:

Whereas, The Jackson County Medical Society recognizes a moral obligation to assist members of the medical profession who have, as a result of their donating time and effort to the non-profit Kansas City Community Blood Bank, been named as respondents by the Federal Trade Commission and

Whereas, These physicians, in defending themselves during 15 weeks of hearings in the summer of 1963, required legal representation to the extent of an estimated $50,000, and

Whereas, Further legal action may be necessary to protect the nation's system of volunteer blood donation from the governmental agency's attack, and

Whereas, The Jackson County Medical Society has assessed its own membership $30.00 and thereby raised some $16,000 for the payment of legal fees, and

Whereas, The Jackson County Medical Society plans to solicit further help from the medical profession in the state of Kansas and from the American Medical Association, therefore, be it

Resolved, That the House of Delegates of the MSMA approve an assessment of its individual members of $5.00 to assist in the payment of legal fees and costs incurred in this litigation, and be it further

Resolved, That the disbursal of such funds be determined by the Council of the MSMA.

On motion of Dr. Benoit, duly seconded, the resolution was approved for submission to the House of Delegates to apply to the year 1965.

Meeting of March 11, 1964

The Council met at 9:30 a.m., Hotel Chase, St. Louis, with Leonard T. Furlow, M.D., St. Louis, President,

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ELDERLY
ARTHRITIC
PATIENTS...

an effective
GERIATRIC
antiarthritic
with
REASSURING SAFETY FACTORS

Effectiveness, dependability and reassuring Safety Factors make PABALATE-SF a logical choice for antiarthritic therapy in elderly patients—even when osteoporosis, hypertension, edema, peptic ulcer, cardiac damage, latent chronic infection and other common geriatric conditions are present. The potassium salts of PABALATE-SF cannot contribute to sodium retention...the enteric coating assures gastric tolerance...and clinical experience shows that this preparation does not precipitate the serious reactions often associated with corticosteroids or pyrazolone derivatives.

Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

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In each persian-rose enteric-coated tablet: potassium salicylate 0.3 Gm., potassium aminobenzoate 0.3 Gm., ascorbic acid 50.0 mg.

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presiding. Those present were Drs. Furlow; Joseph L. Fisher, St. Joseph; David N. Kerr, St. Louis; Paul H. Rother, St. Charles; Byron M. Stuart, Boonville; Rolla B. Wray, Nevada; Hector W. Benoit Jr., Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Stanley S. Peterson, Springfield; A. W. Neilson, St. Louis; H. E. Petersen, St. Joseph; Paul R. Whitener, St. Louis; Messrs. Jordan Singleton, Vincent Sanders, Hollister Smith, Ray McIntyre, St. Louis; Gary Schnedler, Springfield; Misses Peggy Heilig and Helen Penn, St. Louis.

NEW COUNCILORS

Dr. David N. Kerr, St. Louis, 3rd District, was introduced as were Dr. Paul H. Rother, St. Charles, 4th District, and Dr. Rolla B. Wray, Nevada, 6th District, who were appointed by the council to fill unexpired terms.

Dr. M. D. Overholser receives the University's alumni award from Dr. Wyeth Hamlin, president of the organization.

CHAIRMAN

On motion, duly seconded, Byron M. Stuart, M.D., Boonville, was reelected Chairman of the Council and presided through the remainder of the session.

OFFICERS ELECTED

On motions, duly seconded, the following officers were elected by acclamation: John I. Matthews, Jefferson City, Secretary; Charles R. Doyle, St. Louis, Treasurer; Hector W. Benoit Jr., Kansas City, Vice Chairman of the Council.

AMA SESSION

Dr. Neilson said that there was indication that the AMA might consider St. Louis for an Interim Session in the not too distant future. It was suggested that the Missouri delegation be more active at the coming AMA session, possibly having some favor to give to all delegates. On the suggestion of Dr. Kerr, Dr. Stuart appointed a committee of Drs. Furlow, Wray and Benoit to work with the delegates and Tom O'Brien on this matter.

MENTAL HEALTH COMMITTEE

The Mental Health Planning Committee was discussed and on motion of Dr. Furlow, duly seconded, the names of Dr. B. J. Bass, Salem, and Dr. Rae W. Froelich, Lebanon, were selected to be submitted for appointment to this committee.

DATES OF SESSION

Mr. McIntyre said that Dr. Matthews had suggested that the Annual Session might begin in the middle of the week, as with a House of Delegates session on Thursday evening, Friday and Saturday devoted to scientific work, banquet on Saturday evening and adjournment after the House of Delegates breakfast on Sunday morning. The Council was asked to study this suggestion.

NEXT MEETING

The plans for a meeting of the Council on May 15 and 16, followed by a meeting of component society officers with a dinner on Saturday night and workshop on Sunday morning was discussed. It was voted on motion, duly seconded, that this type of meeting be held, beginning with a council luncheon on Friday, May 15. It was agreed that the session should be held in St. Louis.

Byron M. Stuart, M.D., *Chairman*

REGISTRATION AT THE 106TH ANNUAL SESSION

First Councilor District—33

- Bauman, Henry C., Maryville
- Beck, Paul M., St. Joseph
- Bohnsack, R. W., Brookfield
- Broyles, W. A., Bethany
- Bruce, Paul C., Excelsior Springs
- Carlin, A. L., Stanberry
- Clark, C. L., Trenton
- Conrad, Joseph, Chillicothe
- Day, Maxwell, St. Joseph
- Dixon, John R., Brookfield
- Dowell, Donald M., Chillicothe
- Fisher, Joseph L., St. Joseph
- Forman, George W., St. Joseph
- Gary, George, Marceline
- Goldberg, I. E., Braymer
- Hobbs, E. B., Smithville
- Imes, E. D., Maryville
- Long, Forrest C., Savannah
- Luckenbill, P. T., Plattsburg
- McCracken, S. R., Excelsior Springs
- McDaniel, John R., St. Joseph
- McDonald, Wilbur P., St. Joseph
- Maginn, R. L., St. Joseph
- Mandler, George, Chillicothe
- Martin, J. N., St. Joseph
- Matteson, Frank B., Grant City
- Petersen, H. E., St. Joseph
- Potter, Thompson E., St. Joseph
- Riddell, R. V., St. Joseph
- Sklenar, Donald E., St. Joseph
- Vandiver, V. D., Chillicothe
- Wadlow, E. E., St. Joseph
- Werner, F. C., Kansas City

Second Councilor District—17

- Bach, Lysle M., Hannibal
- Campbell, J. E., Macon
- Canella, J. M., Hannibal
- Davis, Landis Y., Canton
- Fleming, Thomas S., Moberly
- Foreman, Phillip B., Hannibal
- Grim, E. M., Kirksville
- Hamlin, Wyeth, Hannibal
- Harms, F. L., Salisbury
- Landau, Daniel B., Hannibal
- Lewellen, Charles H., Louisiana
- Middleton, John W., Louisiana
- Roller, Merrill J., Hannibal
- Rowlette, Avery P., Moberly
- Stuerman, L. G., Louisiana
- Szymanski, Stanley, Moberly
- Tarvydas, Francis, Edina

Third Councilor District—209

- Allen, Henry C., Clayton
- Allen, W. M., St. Louis
- Arneson, A. N., St. Louis
- Auer, Edward T., St. Louis
- Austin, M. G., St. Louis
- Banton, William C., St. Louis
- Barden, F. W., St. Louis
- Bartlett, Willard Jr., St. Louis
- Bartnick, Mitchel L., St. Louis
- Bassett, R. B., St. Louis
- Bawell, Malcolm B., St. Louis
- Beckman, D. S., St. Louis
- Behrens, G. L., Kirkwood
- Bell, Robert M., St. Louis
- Benjamin, Durand, St. Louis
- Berman, Joseph P., St. Louis
- Berry, John W., Clayton
- Boemer, L. C., St. Louis
- Boldizar, A. G., St. Louis
- Bowen, S. F. Jr., St. Louis
- Bradley, F. R., St. Louis
- Bradley, Richard V., Clayton
- Bricker, Eugene M., St. Louis
- Broun, G. O. Jr., St. Louis
- Bryan, James H., Clayton
- Burford, C. E., St. Louis
- Clark, Clarence L., Creve Coeur
- Conrad, Marshall B., St. Louis
- Cook, Ralph L., St. Louis
- Cooper, Thomas J., St. Louis
- Criscione, J. R., St. Louis
- Danis, Peter G., St. Louis
- Davis, Martin W., St. Louis
- Deakin, Rogers, St. Louis
- Devine, John B., St. Louis
- Diemer, Peter A., St. Louis
- Doyle, Charles R., St. Louis
- Drake, T. G., St. Louis
- Dreyer, Carl J., Brentwood
- Eades, D. W., St. Louis
- Eberle, John P., St. Louis
- Eckert, Clarence T., St. Louis
- Edwards, Joseph C., St. Louis
- Ernst, E. C., St. Louis
- Finnegan, Joseph V., St. Louis
- FitzGerald, Leo P., St. Louis
- Ford, Lee T., St. Louis
- Forsen, James A., St. Louis
- Foster, Howard M., St. Louis
- Fox, Robert E., St. Louis
- Franklin, Max S., St. Louis
- Frawley, Thomas, St. Louis
- Frederick, Raymond O., St. Louis
- Fries, Armand D., St. Louis
- Funsch, Robert E., St. Louis
- Furlow, Leonard T., St. Louis
- Gagliardo, Joseph, St. Louis
- Gansloser, W. M., Clayton
- Geisler, Gerald F., St. Louis
- Gillespie, William, St. Louis
- Gladney, John H., St. Louis
- Gnade, Albert J., St. Louis
- Goell, Robert S., St. Louis
- Goldman, Melvin L., St. Louis
- Graneto, Joseph, St. Louis
- Green, William R., St. Louis
- Gulick, Charles R., St. Louis
- Gunn, Walter T., St. Louis
- Haddock, James N., Clayton
- Hamilton, E. G., Clayton
- Hansel, French K., St. Louis
- Harell, Alex, St. Louis
- Hartnett, Leo J., St. Louis
- Hawkins, George L. Jr., Webster Groves
- Hilbert, Paul H., St. Louis
- Hobart, Carl, St. Louis
- Horner, John L., St. Louis
- Hummel, William C., Richmond Heights
- Hunleth, Frank E., St. Louis
- Jean, J. T., St. Louis
- Jensen, Joshua E., St. Louis
- Johnstone, John, Kirkwood
- Jones, Augustin, St. Louis
- Jones, Otey S., St. Louis
- Jones, Vincent L., St. Louis
- Kappesser, N. B., Ladue
- Kelley, Robert W., St. Louis
- Kendig, John H., St. Louis
- Kerr, David N., Clayton
- Kettelkamp, George D., St. Louis
- Kinsella, Edward D., St. Louis
- Kinsella, Peter W., St. Louis
- Kinsella, Ralph, St. Louis
- Knight, W. A. Jr., St. Louis
- Kohler, Louis H., St. Louis
- Kopp, L. J., St. Louis
- Kramolowsky, H. H., St. Louis
- Krebs, Joseph M., Clayton
- Kuebrich, T. C., Ferguson
- Ladd, Charles B., St. Louis
- Lane, Daniel K., St. Louis
- Lanier, Earl W., St. Louis
- LeBlanc, Leo, Clayton
- Lederman, Joseph, St. Louis
- Link, Alexander J., St. Louis
- Littmann, Lewis, St. Louis
- Loeb, Virgil Jr., St. Louis
- Loeffel, Ellen, St. Louis
- Lonergan, Warren M., Webster Groves
- Lonsway, Maurice J., St. Louis
- Lottes, J. Otto, St. Louis
- Lowenstein, Paul, St. Louis
- Lucido, Joseph L., St. Louis
- McAdams, C. R., St. Louis
- Macdonald, William C., St. Louis
- Macnish, J. M., St. Louis
- Macon, William L. Jr., St. Louis
- Malles, A. Conrad, St. Louis
- Mannis, Ben G., St. Louis
- Max, Paul F., St. Louis
- Melick, W. F., St. Louis
- Mendonsa, Lawrence E., St. Louis
- Merenda, Sam J., St. Louis
- Michael, V. E., St. Louis
- Millikin, L. A., St. Louis
- Morris, M. E., St. Louis
- Mowrey, W. O., St. Louis
- Mueller, Robert, St. Louis
- Muether, R. O., St. Louis
- Murawsky, W. V., Chesterfield
- Murphy, James P., St. Louis
- Murphy, Paul, St. Louis
- Muschany, Norman K., St. Louis
- Neilson, Arthur W., St. Louis
- Nester, C. A., St. Louis
- Newman, Percy, St. Louis
- Newton, W. T., St. Louis
- Ohmoto, Masao, St. Louis
- Olmsted, W. H., St. Louis
- O'Neal, Lawrence W., Clayton
- Oppenheimer, Henry E., St. Louis
- O'Reilly, D. Elliott, St. Louis
- Orenstein, Joseph M., St. Louis
- Pernoud, F. G., St. Louis
- Pernoud, M. F., St. Louis
- Potter, Reese H., St. Louis
- Probstein, J. G., St. Louis
- Pruett, Burchard S., St. Louis
- Rainey, Robert, St. Louis
- Ramsey, Robert H., Ferguson
- Repetto, Albert, St. Louis
- Ries, Douglas A., Clayton
- Riordan, L. M., St. Louis
- Roth, John, St. Louis
- Roulhac, George E., St. Louis
- Rusan, T. E., St. Louis
- Sauer, W. N., St. Louis
- Schaper, Ernest H., St. Louis
- Sciortino, John S., Ladue
- Scopelite, Joseph A., St. Louis
- Scott, Elwin P., St. Louis
- Scott, Horace W., St. Louis
- Scott, Wendell G., St. Louis
- Seddon, John W., St. Louis
- Senturia, Ben H., St. Louis
- Sertl, John D., St. Louis
- Sexton, Daniel L., St. Louis
- Shen, Jerome T. Y., St. Louis
- Sherard, J. C., St. Louis
- Sherwin, Charles S., St. Louis
- Signorelli, A. J., St. Louis
- Simon, David L., St. Louis
- Simon, J. I., St. Louis
- Spalding, Donald, St. Louis
- Starkloff, Max, St. Louis
- Steinberg, Franz U., St. Louis
- Stewart, John W., St. Louis
- Strauss, Arthur, St. Louis
- Stutsman, Albert C., St. Louis
- Sullivan, Clement J., St. Louis
- Sweet, Herbert C., St. Louis
- Thale, Thomas, St. Louis
- Thompson, J. W., St. Louis
- Thompson, Lawrence D., St. Louis
- Tibbs, William A. Jr., St. Louis
- Titterington, Paul F., St. Louis
- Tjoflat, O. E., St. Louis
- Tremain, Irl G., St. Louis
- Turner, Rush, St. Louis
- Ungvari, Joseph C., St. Louis
- Vermillion, C. O., Kirkwood
- Vezeau, Stephen, St. Louis
- VonKaenel, Joseph E., St. Louis
- Wacker, Leo L., St. Louis
- Wall, Emmett D., St. Louis
- Walters, Henry W., Clayton
- Walton, Franklin, St. Louis
- Wattenberg, Carl A., St. Louis
- Weir, Don C., Webster Groves
- Weiss, Richard S., St. Louis
- Wentzel, L. R., St. Louis
- Weyerich, Leon F., St. Louis
- Wiegand, Herbert C., St. Louis
- Wissner, Seth, St. Louis
- Wotawa, W. J., St. Louis
- Yore, Richard W., St. Louis
- Younger, Anita, St. Louis
- Younger, Ernest, St. Louis
- Zeinert, O. B., University City
- Zillgitt, George H., St. Louis

Fourth Councilor District—96

- Alberts, Phillip S., Clayton
- Alex, Morris, St. Louis
- Bagby, J. W., Clayton
- Bailey, W. H., St. Louis
- Beam, Sim F., St. Louis
- Bergmann, Martin, St. Louis
- Berry, Paul T., Troy
- Birenbaum, Aaron, St. Louis
- Brenner, Paul A., Owensville
- Cacioppo, Joseph E., St. Louis
- Cadbury, Jane B., Chesterfield
- Catanzaro, Rudolph E., St. Louis
- Coates, Thomas, St. Louis
- Costrino, J. A., St. Louis
- Cowdry, Edmund V. Jr., Clayton
- Creech, Joseph C., Troy
- Crider, Russell J., St. Charles
- Cutler, Harry, St. Louis
- Damron, E. O., Elsberry
- Davis, Edgar W., St. Louis
- Deyton, John W., St. Louis
- Diehr, M. A., St. Louis
- Drescher, Emmett B., St. Louis
- Eisenmann, B. P., New Haven
- Emerson, R. L., Brentwood
- Fairshter, Alex E., St. Louis
- Falk, O. P. J., St. Louis
- Feldman, David, Clayton
- Finkel, B. W., St. Louis
- Freiheit, H. J., St. Louis
- Hardy, Guerdan, Clayton
- Hengen, H. E., Bridgeton
- Hoelscher, Harold, Warrenton
- Holscher, E. C., St. Louis
- Howe, Louis F., Brentwood
- Izmirlian, Grant, Webster Groves
- Johnson, G. C., Marthasville
- Jones, Victor, Brentwood
- Judge, W. T., Crystal City
- Keller, R. M., Wentzville
- Kendis, Joseph B., St. Louis
- King, E. E., St. Louis
- Klippel, Allen P., Clayton
- Koch, Robert E., St. Louis
- Kopp, Jules H., St. Louis
- Kuttner, Marianne, University City
- Lerman, George S., St. Louis
- Lewin, W. Howard, St. Louis
- Lohr, Robert W., Ferguson
- Magness, Guy N., University City
- Marmor, William A., St. Louis
- Mayer, Robert A., St. Louis
- Meador, James R., St. Louis
- Melburn, Colleen, St. Louis
- Merz, J. J., St. Louis
- Miles, Paul W., St. Louis
- Monat, Seymour, St. Louis
- Muench, L. O., Washington
- Nakada, James R., Frontenac
- Phillips, Hanford, St. Louis
- Poggemeier, W. H., St. Charles
- Post, J. P., Washington
- Richardson, George A., Union
- Richardson, W. R., Union
- Robertson, Frank G., St. Louis
- Roblee, Melvin A., St. Louis
- Rosenbaum, Herbert, St. Louis
- Rosenstein, Daniel L., University City
- Rother, Paul H., St. Charles
- Rutledge, John F., Crystal City
- Schattyn, Martyn, St. Louis

Schwartz, Melvin M., Richmond Heights
Skilling, David M. Jr., St. Louis
Smith, Jack I., Brentwood
Stein, H. J., St. Louis
Stein, Leonard, St. Louis
Sterling, John A., Kirkwood
Strehlman, B. A., Union
Sutter, Richard A., University City
Tashma, Sigmund, St. Louis
Treiman, R. C., St. Louis
Trueblood, A. C. Jr., Kirkwood
Viers, Wayne A., St. Louis
Vinyard, Paul, Ferguson
Vitale, Anthony J., St. Louis
Vitale, N. S., St. Louis
Walker, Willard B., St. Louis
Weinhaus, Robert S., St. Louis
West, Joseph W., St. Louis
Whitener, Miles C., St. Ann
Whitener, Paul R., St. Ann
Wipfler, E. J. Jr., St. Charles
Workman, George M., Hermann
Wulff, George J. L. Jr., St. Louis
Wyatt, Louis C., Kirkwood

Fifth Councilor District—63

Allen, William C., Columbia
Asel, Norman D., Columbia
Baker, A. Sherwood, Columbia
Baker, James M., Columbia
Belden, E. A., Jefferson City
Bloom, William A., Fayette
Bruner, Claude R., Columbia
Buesseler, John A., Columbia
Bumgarner, Roger, Columbia
Byland, S. J., Wellsville
Cochran, Donald Q., Columbia
Cremer, William J., Fulton
Durst, Henry, Fulton
Dwyer, Thomas L., Mexico
Epple, Lawrence K., Mexico
Exon, C. S., Jefferson City
Fuchs, George J., Columbia
Garner, L. M., Jefferson City
Guhleman, Henry V., Jefferson City
Gurnee, L. H., Jefferson City
Hardwicke, H. M., Jefferson City
Jolly, Ben N., Mexico
Kallenbach, G. P., Mexico
Kauffman, Ruth, Versailles
Lee, Gerald B., Columbia
Leslie, James T. Jr., Jefferson City
Love, D. M., Jefferson City
Loyd, Earl L., Jefferson City
McHaney, John W., Jefferson City
Martt, Jack M., Columbia
Matthews, John I., Jefferson City
Mayer, William D., Columbia
Meinershagen, C. W., Jefferson City
Miller, LeRoy J., Columbia
Mitchell, Frank L., Columbia
Modlin, John, Columbia
Neal, M. Pinson, Columbia
Overholser, M.D., Columbia
Rall, Kenneth L., Columbia
Ray, C. Thorpe, Columbia
Ridings, G. R., Columbia
Ritterbusch, James K., Fulton
Rodes, Ned D., Mexico
Russell, J. P., Jefferson City
Sabates, Felix N., Columbia
Schmidt, J. H., Jefferson City
Shaw, William J., Fayette
Shull, G. Donald, Jefferson City
Smith, Grafton A., Columbia
Spratt, J. S., Columbia
Stauffer, H. B., Jefferson City
Stephan, August P., Jefferson City
Stephenson, Hugh E., Columbia
Stuart, Byron M., Boonville
Sydow, Henry, Fulton
Tanner, R. H., Jefferson City
Tellez, Edward R., Fulton
Washburn, J. L., Versailles
Watts, Byron, Jefferson City
Wells, Donald E., Glasgow
Wilson, Vernon E., Columbia
Winn, G. W., Boonville
Ziegler, Anthony Jr., Vandalia

Sixth Councilor District—25

Barger, O. B., Harrisonville
Bradshaw, W. D., Clinton
Brazos, John C., Sedalia
Cook, Thomas, Richmond
Eklund, Alfred, Pleasant Hill
Folkner, A. L., Warrensburg
Giesler, Don H., Osceola
Gonser, Karl B., Sedalia
Hughes, Shelby, Clinton
Johnson, C. S., Warrensburg
Kelling, Douglas, Waverly
King, Richard H., Clinton
Koppenbrink, W. E., Higginsville
Lawrence, John R., Marshall
Lederer, Charles M., Warrensburg
Luter, Carter W., Butler
McCorkle, E. Lee, Marshall
Magee, R. L., El Dorado Springs
Pearse, Roy W. Jr., Nevada
Siegel, Carl D., Sedalia
Sloan, Roy C., Marshall
Smith, James O., Clinton
Walker, Hugh B., Clinton
Ward, Joe W., Lexington
Wray, Rolla, Nevada

Seventh Councilor District—50

Andrews, Berneil W., Kansas City
Arst, H. E., Kansas City
Barelli, Pat A., Kansas City
Barnard, John L., Kansas City
Bates, G. Comer, Kansas City
Benoit, Hector W. Jr., Kansas City
Berry, Maxwell G., Kansas City
Bowser, John F., Kansas City
Brown, Adrian J., Kansas City
Buckner, Robert C., Kansas City
Byers, P. L., Kansas City
Caldwell, John K., Kansas City
Carrier, Edson C., Kansas City
Coffey, R. R., Kansas City
Duncan, Ralph E., Kansas City
Eubank, D. M., Raytown
Ferris, Carl R., Kansas City
Fulton, Albert E., Kansas City
Gist, W. W., Kansas City
Gottsch, J. C., Kansas City
Griffith, John A. Jr., Kansas City
Growdon, John A., Kansas City
Hibbard, Blaine Z., Kansas City
Hollweg, Kenneth C., Kansas City
Hunt, Claude J., Kansas City
Johnson, Thomas M., Kansas City
Katz, Milton, Kansas City
Kennard, G. Keith, Kansas City
Kiene, Richard H., Kansas City
Kitchen, W. M., Kansas City
Korth, W. M., Kansas City
Kranson, S. J., Independence
Lapi, Angelo, Kansas City
McDonald, Victor G. Jr., Kansas City
McVay, James R. Jr., Kansas City
MacInnis, Florence E., Kansas City
Miller, Gerald L., Kansas City
Mixson, William C., Kansas City
Murphy, Robert J., Kansas City
Nicolay, Kenneth S., Kansas City
Owens, Robert H., Kansas City
Perry, Ralph, Kansas City
Reinhardt, G. R., Kansas City
Reister, Philip D., Kansas City
Rubin, Sidney, Kansas City
Santoro, C. G., Kansas City
Smith, A. B., Kansas City
Stockwell, A. Lloyd, Kansas City
Wheeler, Charles B., Kansas City
Williams, Vincent T., Kansas City

Eighth Councilor District—59

Anderson, Paul B., Neosho
Auner, Cecil R., Springfield
Bareis, Robert J., Marshfield
Bonebrake, M.D., Springfield
Brasher, A. C., Mount Vernon
Brown, James T., Springfield
Callaway, Guy Jr., Springfield
Clarke, Michael J., Springfield
Cohle, Richard R., Carthage
Coller, Fred, Springfield
Crispell, Lawrence S., Joplin
Donley, Robert R., Monett
Duncan, Robert D., Springfield
Ellis, Francis J., Springfield
Farthing, Gene, Springfield
Ferguson, John P., Springfield
Ferguson, Louis H., Joplin
Ferrell, T. E., Springfield
Glass, W. J., Monett
Glover, Kenneth, Mount Vernon
Graves, Arthur, Mount Vernon
Griffin, Evelyn, Buffalo
Griffin, O. A., Buffalo
Hall, Durward G., Springfield
Ivy, H. B., Springfield
Jeans, Virgil S., Joplin
Knabb, Kenneth E., Springfield
Kolze, V. W., Springfield
Leslie, J. E., Springfield
Litton, Lyle D., Springfield
Lockhart, C. E., Springfield
McAlhany, Howard, Springfield
McCraw, Doyle, Bolivar
McIntire, Emery J., Carthage
McNew, W. T., Carthage
Macdonnell, T. M., Marshfield
Maddox, John D., Joplin
Maher, Robert W., Springfield
Maple, Frank, Springfield
Napper, Marvin L., Springfield
Newman, Mary, Cassville
Papp, Sandor D., Joplin
Peterson, Stanley S., Springfield
Post, Winfred L., Joplin
Powell, Edwin M., Springfield
Roper, S. D., Ozark
Schulte, G. A., Joplin
Scorse, S. W., Joplin
Snead, William H., Springfield
Sweany, Henry C., Mount Vernon
Tillman, Walter, Springfield
Turner, Glenn O., Springfield
Walker, William M., Springfield
Whitehead, L. L., Neosho
Whitten, M. Foster, Carthage
Williams, John W., Springfield
Wommack, Fred L., Crane
Wood, George H., Carthage
Yancey, Daniel L., Springfield

Ninth Councilor District—17

Bass, B. J., Salem
Cooper, C. W., Thayer
Froelich, Rae W., Lebanon
Garrison, T. W. Jr., Camdenton
Hammler, Christiana V., St. James
Hart, Martin, Salem
Hasek, James A., Cabool
Lytle, William R., Rolla
Miller, Harold W., Willow Springs
Riffel, Gordon W., Bourbon
Russell, Barbara, Rolla
Stricker, E. A., St. James
Summers, J. H., Lebanon
Underwood, M. K., Rolla
Wall, Joe A., Houston
Wilson, John E., West Plains
Young, Robert B., Rolla

Tenth Councilor District—31

Appleberry, C. H., Flat River
Beecher, S. B., Poplar Bluff
Bull, Ben M., Ironton
Burford, E. K., Cape Girardeau
Carron, O. A., Perryville
Chastain, C. W., Farmington
Cook, O. W., Caruthersville
Cresswell, G. F., Potosi
Crowe, John T., Cape Girardeau
English, W. D., Cardwell
Estes, Albert M., Cape Girardeau
Frazier, R. L., Charleston
Mullen, Jack, Bonne Terre
Hansbrough, E. T., Poplar Bluff
Haw, Marvin T., Bonne Terre
Huckstep, R. A., Farmington
Jaeger, J. N., Jackson
Jung, J. Marshall, Illmo
Kasten, Melvin C., Cape Girardeau
Lutkewitte, Joseph F., Ste. Genevieve
McDermott, A. E., Perryville
McDonald E. T., Jackson
Patton, William G., Ironton
Reynolds, G. A., Cape Girardeau
Ritter, Raymond A., Cape Girardeau
Sargent, Alden P., Sikeston
Seabaugh, William O. L., Cape Girardeau
Shoss, Milton, Cape Girardeau
Taylor, Van W., Bonne Terre
Wilson, Charles F., Cape Girardeau
Wolff, Paul, Cape Girardeau

Guest Physicians—42

Ahadi, A. M., St. Louis
Banton, M. Roman, St. Louis
Beamish, R. E., Winnipeg, Canada
Black, B. M., Rochester, Minn.
Brewe, A. A., Alton, Ill.
Buddrus, David J., Evansville, Ind.
Corpe, Ray, Rome, Ga.
Curtis, F. K., Bainbridge, Wash.
Davis, William D. Jr., New Orleans, La.
Dillard, Burl, University City
Dukelow, D. A., Chicago, Ill.
Effler, Donald, Cleveland, Ohio

In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

CSO-9193

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

Ellison, Edwin H., Milwaukee, Wisc.
Griswold, H. E., Portland, Oregon
Haskins, Arthur L., Baltimore, Md.
Hightower, N. C., Temple, Texas
Horton, D. E., Norfolk, Va.
Johnston, Joseph A., Detroit, Mich.
Kaufman, L. W., Milwaukee, Wisc.
Kline, Nathan, Orangeburg, N. Y.
Lavietes, Paul, New Haven, Conn.
McCurrry, J. H., Cash, Ark.
Marchioro, Thomas, Aurora, Colo.
Martin, R. Lee, New York, N. Y.
Mooney, R. H., Cleveland, Ohio
Paullus, George E., Memphis, Tenn.
Pfuetze, Karl H., Hinsdale, Ill.
Pianetto, Mario B., Koch
Rieselbach, Richard E., St. Louis
Romberger, Wesley E., Clayton
Ross, Richard S., Baltimore, Md.
Schatzki, Richard, Belmont, Mass.
Scrivner, W. C., East St. Louis, Ill.
Seaurg, John, New Orleans, La.
Seltzer, H. S., Dallas, Texas
Shea, John, Memphis, Tenn.
Stevens, Edward M., Columbia
Welch, Norman, Boston, Mass.
Wilson, John C., Los Angeles, Calif.
Wilson, William J., Columbia
Zimmerman, Hyman J., Chicago, Ill.
Zubrod, Gordon, Chevy Chase, Md.

There were 600 members registered, 42 guest physicians, 32 students, 37 residents and interns, 179 exhibitors, 117 medical technologists, 179 Woman's Auxiliary, 26 guests, making a total registration of 1,212.

Missouri Medical Meetings

Component Society Meeting Dates

Audrain County Medical Society—third Monday of each month.
Barton-Dade County Medical Society—third Wednesday of each month.
Benton County Medical Society—meets only on call.
Boone County Medical Society—first Tuesday of each month.
Buchanan County Medical Society—first Wednesday of each month.
Butler-Ripley-Wayne County Medical Society—first Wednesday of each month.
Callaway County Medical Society—third Thursday of each month.
Cape Girardeau County Medical Society—first Monday of each month.
Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month, September through May.
Clay County Medical Society—last Tuesday of each month.
Clinton County Medical Society—meets only on call.
Cole County Medical Society—fourth Tuesday of each month.
Cooper County Medical Society—first Monday after the 15th of each month.
Dallas-Hickory-Polk County Medical Society—first Wednesday of each month.
Dunklin County Medical Society—first Tuesday of each month.
Franklin-Gasconade-Warren County Medical Society—first Tuesday of each month at the St. Francis Hospital, Washington, at 7:00 p.m.
Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb)—second Thursday of each month.
Greene County Medical Society—fourth Friday of each month.
Henry County Medical Society—meets only on call.
Howard County Medical Society—meets only on call.
Jackson County Medical Society—March, May, October and December.
Jasper County Medical Society—second Tuesday of each month, September through May.
Jefferson County Medical Society—meets fourth Tuesday of each month.
Johnson County Medical Society—meets only on call.
Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 p.m., at the Victory Cafe, Lexington.
Lewis-Clark-Scotland County Medical Society—meets only on call.
Lincoln-St. Charles County Medical Society—fourth Tuesday of each month.
Marion-Ralls-Shelby County Medical Society—third Tuesday of each month, 7:30 p.m.
Mid-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)—fourth Thursday of each month.
Miller County Medical Society—meets only on call.
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve)—fourth Thursday of each month.
Moniteau County Medical Society—second Thursday of each month.
Nodaway-Holt-Atchison-Gentry-Worth County Medical Society—second Tuesday of each month.
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)—second Tuesday of each month, September through June.
Pemiscot County Medical Society—third Thursday of each month.
Perry County Medical Society—second Thursday of each month.
Pettis County Medical Society—third Monday each month, September through May.
Pike County Medical Society—third Tuesday of each month.
Platte County Medical Society—meets only on call.
St. Louis County Medical Society—second and fourth Wednesday of each month.
St. Louis Medical Society—third Tuesday of each month, October through May.
Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month, September through May.
South Central Counties Medical Society (Howell-Oregon-Texas-Wright-Douglass-Ozark)—fourth Wednesday of each month.
Webster County Medical Society—meets only on call.
West Central Missouri Society (Bates-Cass-St. Clair-Vernon-Cedar)—second Thursday of each month.

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ANNUAL MEETING OF THE MISSOURI STATE MEDICAL FOUNDATION, HOTEL CHASE, ST. LOUIS, MARCH 9, 1964

The meeting was called to order by Leonard T. Furlow, M.D., President, at 4:30 p.m. A quorum was declared present. Dr. Furlow stated that the minutes of the 1963 Annual Meeting in Kansas City, following immediately the Monday afternoon, March 9, session of the Missouri State Medical Association House of Delegates, were published in the July 1963 issue of Missouri Medicine. He called for any additions or deletions to the minutes. There being none, the minutes of the 1963 meeting were declared approved as published. He also pointed out that the minutes of the Board of Trustees meeting of the Foundation, following the 1963 Annual Meeting, were also published in the July 1963 issue of Missouri Medicine.

Dr. Furlow reported that a letter to all members of MSMA over the signature of the President of the Foundation soliciting donations to the Foundation was mailed about December 1, 1963. He stated that results of that mailing were somewhat disappointing. He also brought to the attention of those present that the House of Delegates of the MSMA passed an assessment in 1962 of $7.50 per year for the years 1963, 1964 and 1965 per member for the Foundation Loan Fund. Dr. Furlow directed attention to the status of the Foundation as of February 1, 1964, a mimeographed copy of which had previously been passed out to those in attendance, and is as follows:

FEBRUARY 1, 1963 TO FEBRUARY 1, 1964

INCOME*

Contributions

1963 Assessments MSMA Membership	$24,211.56
Special Grant—Edward Mallinckrodt 2/6/63	5,000.00
Special Grant—C. V. Mosby Company 11/7/63	250.00
Additional Special Contribution from Miss Nellie Evans in memory of her father, Dr. A. L. Evans (Total Now—$3,500)	1,000.00
Donations from Doctor Members	3,775.00
Individual Gifts—non-medical donors	275.00
Donations from County Medical Societies	1,100.00
Tribute Donations, memorials, etc.	257.50
Total Contributions	$35,869.06
Interest on Loans made to Students	121.06
Total Income	$35,990.12

* Figures do not include income from 1964 MSMA assessment.

Loans

Loans Granted to Students (77)	35,550.00
Repayments on Loans	1,160.00

Loan Recapitulation

Total Operations September, 1960 to February 1, 1964

Income to Date (including interest)		$119,509.19
Loans Made to Students to Date	120,070.00	
(Less) Loan Repayments	1,660.00	
Loans Outstanding	118,410.00	118,410.00
Balance on Hand		$ 1,099.19

Total number of loans granted		257
Number of different students receiving loans		103
Students receiving more than one loan	78	
Students receiving one loan	25	

Medical School	*Number of Students Granted Loans*
Missouri University	80
St. Louis University	16
Washington University	2
Tulane University	1
Albert Einstein University	1
Meharry University	2
Baylor University	1
	103

Dr. Furlow stated that the Foundation has recently learned that it will be the recipient of $5,000 in the near future from a will which is now being probated in St. Louis.

Dr. Furlow called for the next order of business which was the election of one member to the Board of Trustees for a term of five years to replace Dr. Leonard Furlow who becomes an ex-officio member as President of the Missouri State Medical Association. Dr. E. A. Stricker nominated Dr. Paul Whitener of St. Louis County for this position on the board. The motion was duly seconded. No other nominations were offered so nominations were closed and Dr. Whitener was duly elected.

The President then announced there would be a short meeting of the Board of Trustees immediately following the adjournment of the Annual Meeting of the Foundation. He then called for any additional business old or new; there being none, the meeting was adjourned.

MISSOURI STATE MEDICAL FOUNDATION BOARD OF TRUSTEES, HOTEL CHASE, ST. LOUIS, MO., MARCH 9, 1964

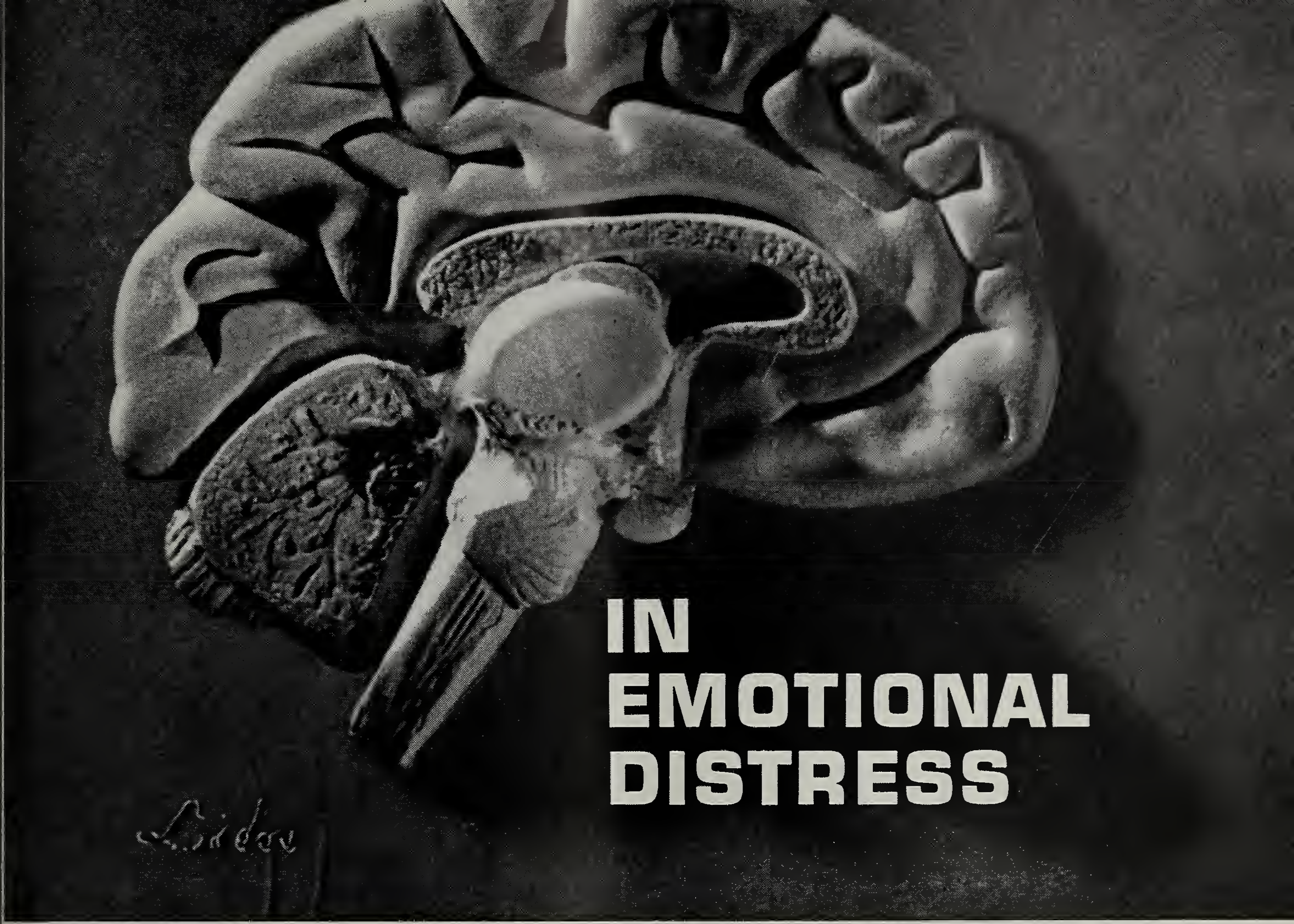
The meeting of the Board of Trustees was called to order by Leonard T. Furlow, M.D., President, in the Khorassan Room, Hotel Chase, immediately following the adjournment of the Annual Meeting of the Missouri State Medical Foundation. Present were: Drs. Leonard T. Furlow, St. Louis; Ben Bull, Ironton; Walter W. Tillman Jr., Springfield; Paul Whitener, St. Louis County; and Mr. Ray McIntyre, St. Louis.

Dr. Furlow explained that the purpose of this meeting was for the election of officers. He then called for nominations for the office of President. The name of Dr. Ben Bull was placed in nomination. No further nominations were offered and Dr. Bull was unanimously elected President.

Dr. Bull then assumed the position as President and called for nominations for the office of Vice President. The name of Walter W. Tillman Jr., was placed in nomination. No other nominations were offered and Dr. Tillman was unanimously elected Vice President.

Nominations were requested for Secretary-Treasurer, and the name of Dr. Charles R. Doyle was presented. There being no additional nominations, Dr. Doyle was unanimously elected Secretary-Treasurer.

A motion was made, seconded, and passed that the following Committee of the Board be authorized to make loans to medical students, residents of Missouri, in the



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name of the Missouri State Medical Foundation, using funds of the Foundation for that purpose: Drs. R. O. Muether, Charles R. Doyle and Paul R. Whitener, all of St. Louis.

Mr. Ray McIntyre was reappointed Assistant Secretary to assist in the administration of the Foundation's program.

There being no further business, the Board of Trustees adjourned at 5:45 p.m.

CHARLES R. DOYLE, M.D., *Secretary-Treasurer*

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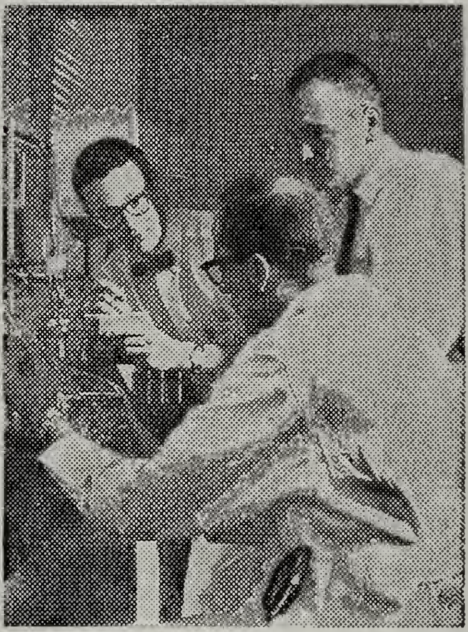

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Officers and Committees

MISSOURI STATE MEDICAL ASSOCIATION

107th Annual Session, St. Louis

April 4, 5, 6, 7, 1965

President, Leonard T. Furlow, St. Louis.

President-Elect, Paul R. Whitener, St. Louis.

Vice Presidents, Ben M. Bull, Ironton; Ralph E. Duncan, Kansas City; Edgar W. Davis, St. Louis.

Secretary, John I. Matthews, Jefferson City.

Treasurer, Charles R. Doyle, St. Louis.

Editor, Joseph V. Finnegan, St. Louis.

Assistant Editor, Helen Penn, St. Louis.

Executive Assistant, Thomas P. Fox, St. Louis.

Field Secretary, Raymond McIntyre, St. Louis.

Executive Secretary, Tom R. O'Brien, St. Louis.

Executive Office, 623 Missouri Theatre Bldg., 634 N. Grand Ave., St. Louis, Mo. 63103. Jefferson 1-0404.

Delegates to the American Medical Association

Richard H. Kiene, Kansas City; alternate, Hugh E. Stephenson Jr., Columbia. A. W. Neilson, St. Louis; alternate, Robert Kelley, St. Louis. 1964-1965. Durward G. Hall, Springfield; alternate, J. H. Summers, Lebanon; J. Loren Washburn, Versailles; Thompson E. Potter, St. Joseph. 1965-1966.

Standing Committees

Scientific and Postgraduate Work—John I. Matthews, Jefferson City, Chairman (1966); Peter G. Danis, St. Louis (1967); J. F. McDonnell, Kansas City (1966); M. Pinson Neal, Columbia (1965); Richard W. Yore, St. Louis (1967). **Associate Members**—Richard O. Craig, St. Joseph; John J. Modlin, Columbia; Paul H. Rother, St. Charles; R. A. Slickman, Kansas City; Edward D. Kinsella, St. Louis; Roy W. Pearse, Nevada; John B. Shapleigh, St. Louis.

Defense—W. W. Gist, Kansas City, Chairman (1965); Wilbur P. McDonald, St. Joseph (1967); Harold W. Miller, Willow Springs (1967); Max S. Franklin, St. Louis (1966); Roland S. Kieffer, St. Louis (1965).

Medical Education and Hospitals—William A. Knight Jr., St. Louis, Chairman (1965); Vernon E. Wilson, Columbia (1967); Carl E. Lischer, St. Louis (1967); Ralph Perry, Kansas City (1966); Kenneth Glover, Mount Vernon (1965). **Associate Member**—Virgil Jeans, Joplin.

Cancer—John E. Lamy, Sedalia, Chairman (1967); E. J. Schewe, Columbia (1967); Joseph L. Fisher, St. Joseph (1966); George A. Carroll, St. Louis (1965); James R. McVay Jr., Kansas City (1965). **Associate Members**—Harvey R. Butcher Jr., St. Louis; Fred B. Coller, Springfield; G. Neil Berry, Kansas City.

Medical Economics—John R. Forgrave, St. Joseph, Chairman (1967); Rae W. Froelich, Lebanon (1967); Martin P. Hunter, Kansas City (1966); G. W. Winn, Boonville (1965); Richard L. Sterkel, St. Louis (1965). **Associate Members**—Kenneth E. Knabb, Springfield; Donald J. Giesler, Osceola; Chester L. Clark, Trenton; Crofford O. Vermillion, St. Louis.

Mental Health—George W. Forman, St. Joseph, Chairman; James N. Haddock, St. Louis; Henry V. Guhleman, Jefferson City; Robert D. Brookes, St. Louis; D. R. Edwards, Sedalia; William F. Clary, Springfield; Paul L. Barone, Nevada; Edward T. Auer, St. Louis; Robert S. Terrill, Kansas City (1965).

Maternal Welfare—A. C. Trueblood, Clayton, Chairman (1967); James E. Keeler, Kansas City (1967); Irwin T. Craig, Joplin (1966); H. C. Willumsen, St. Joseph (1965); William B. See, Columbia (1965). **Associate Members**—C. G. Stauffacher, Sedalia; J. J. Wimp, Kirksville; MacDonald Bonebrake, Springfield; E. E. Wadlow, St. Joseph; Paul E. Kratz, Cape Girardeau; Eugene G. Hamilton, St. Louis; Lyman D. Brown, Springfield; Robert S. Brown, Kansas City; Seymour Monat, St. Louis; Leonard A. Wall, Kansas City.

Infant and Child Care—James A. Kinder, Cape Girardeau, Chairman; E. J. Schwartz, Springfield; James K. Mann, Hannibal; H. E. Petersen, St. Joseph; R. J. LaDriere, St. Louis; Guy N. Magness, University City; Ray B. Lewis, Columbia; James J. Pascoe, Nevada; Jack N. Wiles, West Plains; Gerald E. Hughes, Kansas City. **Associate Members**—C. Reed Boles, Clayton; Ben H. Koon, Bolivar; Ernest L. Glasscock, Kansas City.

Constitution and By-Laws—W. A. Bloom, Fayette, Chairman (1966); Donald M. Dowell, Chillicothe (1967); R. O. Muether, St. Louis (1967); H. M. Parker, Kansas City (1965); James R. Meador, Clayton (1965).

Trauma—Richard E. Lord, St. Louis, Chairman (1965); Glenn McElroy, Columbia (1967); Wilbur P. McDonald, St. Joseph (1966); Thomas G. Otto, Cape Girardeau (1966); Paul W. Meyer, Kansas City (1965). **Associate Members**—Howard J. McAlhaney, Springfield; Carl M. Peterson, Kansas City; Otis E. James, Kansas City; James O. Lottes, St. Louis.

Eye Health—John McLeod, Kansas City, Chairman (1965); Flavius G. Pernoud, St. Louis (1967); Paul M. Beck, St. Joseph (1967); John A. Buesseler, Columbia (1967); Paul G. Wolff, Cape Girardeau (1966). **Associate Members**—Dick H. Underwood, Kansas City; S. Albert Hanser, St. Louis; D. E. Eggleston, Macon; John D. Maddox, Joplin; George Mandler, Chillicothe; James H. Bryan, Clayton; Bill G. Prater, Springfield.

Laboratory Medicine—Charles B. Wheeler, Kansas City, Chairman (1965); James G. Bridgens, Independence (1967); Henry Sweets, Hannibal (1965); David F. Gorelick, Springfield (1966); T. J. Cooper, St. Louis (1966).

Industrial Health—Douglas A. Ries, St. Louis, Chairman (1966); Paul J. Centner, Kansas City (1967); William L. Macon, St. Louis (1967); S. W. Scorse, Joplin (1965); R. A. Sutter, University City (1966). **Associate Members**—James K. Clawson, Springfield; Van W. Taylor, Bonne Terre; C. Rush McAdam, St. Louis.

Diabetes—Harold K. Roberts, St. Louis, Chairman (1966); H. E. Oppenheimer, Clayton (1966); Thomas W. Burns, Columbia (1967); John K. Caldwell, Kansas City (1967); Lucien W. Ide, St. Joseph (1965). **Associate Members**—William H. Olmstead, St. Louis; Harold H. Lurie, Springfield; Edward S. Jones, Harrisonville; Charles F. Wilson, Cape Girardeau.

Anesthesiology—W. W. Tillman, Springfield, Chairman (1966); E. Helen Hash, Kansas City (1967); Kenneth K. Keown, Columbia (1967); Carl K. Ness, St. Joseph (1966); Edward O. Kraft, St. Louis (1965). **Associate Members**—George R. Weeks, Cape Girardeau; Robert B. Dodd, St. Louis; Edwin E. Bowe, Jefferson City.

Control of Venereal Disease—Edwin M. Powell, Springfield, Chairman (1965); A. E. Belden, Jefferson City (1967); A. W. Neilson, St. Louis (1967); Robert B. Bristow, St. Joseph (1966); T. E. McMillan, Kansas City (1965). **Associate Member**—M. Richard Carlin, St. Louis.

Physical Medicine and Rehabilitation—Edward B. Shires, Kansas City, Chairman (1967); Earl P. Holt Jr., St. Louis (1967); Robert H. Fitzgerald, Independence (1966); F. D. Sundstrom, Springfield (1965); James M. Baker, Columbia (1965). **Associate Members**—Otakar Machek, Clayton; John W. Deyton, St. Louis; Lester E. Wolcott, Columbia; Nicholas S. Pickard, Kansas City.

Civil Defense Disaster Medical Care—Carl D. Siegel, Sedalia, Chairman; John T. Crowe, Cape Girardeau; H. D. Steinbeck, Union; Carroll P. Hungate, Kansas City; William F. Bell, Lee's Summit; John H. Walterscheid, Hannibal; Curtis H. Lohr, Clayton; R. Ned White, Springfield; George E. Thoma, St. Louis; George L. Watkins, Farmington; O. P. Hampton, St. Louis; J. S. Sanders, Jefferson City; John L. Mothershead, St. Joseph; Robert R. Donley, Monett (1965).

Aging—Stanley S. Peterson, Springfield, Chairman (1967); Robert C. Kingsland, Clayton (1967); Ralph Perry, Kansas City (1966); C. Thorpe Ray, Columbia (1966); Rolla B. Wray, Nevada (1965). **Associate Members**—Robert H. Tanner, Jefferson City; John A. Griffith, Kansas City; John W. Daake, St. Louis; J. H. Summers, Lebanon; William C. Critchlow, Sikeston; Robert B. Bassett, St. Louis.

Radiology and Ionizing Radiation—Mark D. Eagleton, Clayton, Chairman (1965); Gwilym S. Lodwick, Columbia (1967); J. Stewart Whitmore, Kansas City (1967); James S. Summers, Jefferson City (1966); Marvin L. Napper, Springfield (1965). **Associate Members**—Wayne K. Tice, Independence; William E. Allen, St. Louis; Wayne A. Simril, Clayton.

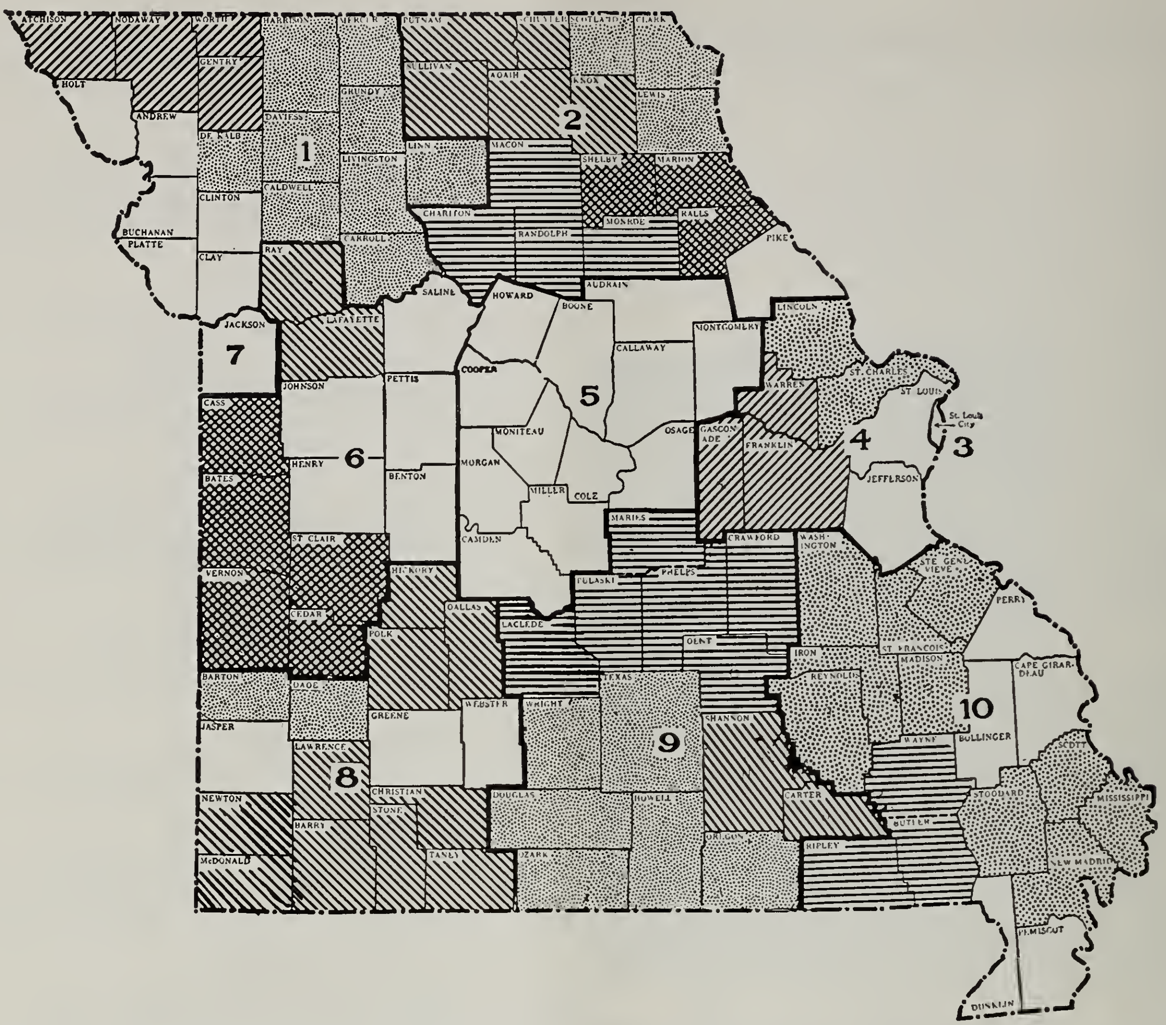
Tuberculosis—Florence E. MacInnis, Kansas City, Chairman; Paul Murphy, St. Louis; H. M. Roberts, Kansas City; Joseph L. Lucido, St. Louis; Walter C. Gray, St. Louis; David N. Kerr, St. Louis; John W. Polk, Springfield: Sheldon B. Beecher, Poplar Bluff; Judson I. Chalkley, Columbia (1965).

Study of Cardiac Disease—James G. Janney, St. Louis, Chairman; Earl L. Loyd, Jefferson City; William I. Park, Springfield; William J. Shaw Sr., Fayette; Jack M. Martt, Columbia; Robert S. Mosser, Independence; William J. Gillespie, St. Louis; Caryl A. Potter, St. Joseph; F. J. Biggs, Poplar Bluff; Joseph C. Edwards, St. Louis; Thomas H. Burford, St. Louis; J. Tenbrook King, Kansas City (1965).

Rural Medical Service—B. J. Bass, Salem, Chairman; J. Marshall Jung, Illmo; James H. Sweiger, Maysville; K. S. Latham, California; H. F. Heolscher, Warrenton; James E. Campbell, Macon; Charles A. Worley, Sweet Springs; A. J. Graves, Mount Vernon (1965).

Public Service—Hector W. Benoit Jr., Kansas City, Chairman; Paul R. Whitener, St. Louis; Armand E. Brodeur, St. Louis; Fred L. Wommack, Crane; Leonard T. Furlow, St. Louis (1965).

Councilor Districts and Counties in Each District


ATCHISON
NODAWAY
WORTH
HARRISON
MERCER
PUTNAM
SCHUYLER
SCOTLAND
CLARK
HOLT
GENTRY
SULLIVAN
ADAIR
KNOX
LEWIS
GRUNDY
ANDREW
DAVIESS
DE KALB
2
1
LINN
MACON
SHELBY
MARION
LIVINGSTON
CLINTON
CALDWELL
CHARITON
MONROE
RALLS
BUCHANAN
PLATTE
CLAY
RAY
CARROLL
RANDOLPH
PIKE
SALINE
HOWARD
BOONE
AUDRAIN
LINCOLN
JACKSON
LAFAYETTE
MONTGOMERY
CALLAWAY
7
JOHNSON
PETTIS
COOPER
ST. CHARLES
WARREN
ST. LOUIS
5
St. Louis City
CASS
MONITEAU
OSAGE
GASCONADE
FRANKLIN
4
3
HENRY
6
MORGAN
BENTON
COLE
JEFFERSON
BATES
MILLER
MARIES
CAMDEN
ST. CLAIR
CRAWFORD
WASHINGTON
STE. GENEVIEVE
VERNON
HICKORY
PULASKI
PHELPS
PERRY
DALLAS
CEDAR
LACLEDE
POLK
DENT
ST. FRANCOIS
IRON
MADISON
CAPE GIRARDEAU
BARTON
REYNOLDS
DADE
TEXAS
WEBSTER
WRIGHT
10
JASPER
GREENE
SHANNON
9
WAYNE
BOLLINGER
LAWRENCE
SCOTT
8
NEWTON
CHRISTIAN
DOUGLAS
HOWELL
CARTER
STODDARD
MISSISSIPPI
STONE
BUTLER
BARRY
TANEY
OZARK
OREGON
RIPLEY
NEW MADRID
McDONALD
PEMISCOT
DUNKLIN

BYRON M. STUART, Boonville, Chairman.

HECTOR W. BENOIT JR., Kansas City, Vice Chairman.

First District: Councilor, Joseph L. Fisher, St. Joseph. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Linn, Livingston, Mercer, Nodaway, Platte, Worth.

Second District: Councilor, Harry L. Greene, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

Third District: Councilor, David N. Kerr, St. Louis. Counties: St. Louis City.

Fourth District: Councilor, Paul H. Rother, St. Charles. Counties: Franklin, Gasconade, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

Fifth District: Councilor, Byron M. Stuart, Boonville. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Howard, Miller, Moniteau, Montgomery, Morgan, *Osage*.

Sixth District: Councilor, Rolla B. Wray, Nevada. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, Ray, St. Clair, Saline, Vernon.

Seventh District: Councilor, Hector W. Benoit Jr., Kansas City. County: Jackson.

Eighth District: Councilor, Doyle C. McCraw, Bolivar. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

Ninth District: Councilor, E. A. Stricker, St. James. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Maries, Oregon, Ozark, Phelps, Pulaski, Shannon, Texas, Wright.

Tenth District: Councilor, W. D. English, Cardwell. Counties: *Bollinger*, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Shaded areas show hyphenated component societies. Counties listed in italics are unorganized.

Component Societies in Affiliation With the Missouri State Medical Association

County	District	President	Address	Secretary	Address
Andrew	1	V. R. Wilson	Rosendale	Warren C. Baker	Savannah
Audrain	5	G. P. Kallenbach	Mexico	Lawrence K. Epple	Mexico
Barton-Dade	8	Herbert M. Arnold	Lamar	T. W. Carroll	Lamar
Benton	6			James A. Logan	Warsaw
Boone	5	Jack M. Martt	Columbia	C. Thorpe Ray	Columbia
Buchanan	1	Wm. B. Rost	St. Joseph	Irwin I. Rosenthal	St. Joseph
Butler-Wayne-Ripley	10	James H. Turner	Poplar Bluff	Wm. D. Robertson	Poplar Bluff
Callaway	5	William J. Cremer	Fulton	Katherine Brown	Fulton
Cape Girardeau	10	Wm. O. L. Seabaugh	Cape Girardeau	Joseph E. Hecker	Jackson
Carter-Shannon	9	H. D. Rollins	Winona		
Chariton-Macon-Monroe-Randolph	2	Thomas S. Fleming	Moberly	J. Will Fleming	Moberly
Clay	1	Edward H. Fischer	N. Kansas City	John M. Williams	Liberty
Clinton	1	W. B. Spaulding	Plattsburg	J. P. Mabrey	Plattsburg
Cole	5	G. D. Shull	Jefferson City	F. O. Tietjen	Jefferson City
Cooper	5	T. C. Beckett	Boonville	D. Hata	Boonville
Dallas-Hickory-Polk	8	Ben H. Koon	Bolivar	Evelyn Griffin	Buffalo
Dunklin	10	Owen J. Swafford	Senath	E. L. Spence	Kennett
Franklin-Gasconade-Warren	4	B. P. Eisenmann	New Haven	Carvel T. Shaw	Hermann
Grand River Medical Society (Caldwell-Livingston-Carroll-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb)	1	James H. Sweiger	Maysville	Jack L. Vinyard	Carrollton
Greene	8	Kenneth E. Knabb	Springfield	Guy D. Callaway Jr.	Sringfield
Henry	6	J. O. Smith	Clinton	R. S. Hollingsworth	Clinton
Howard	5	William J. Shaw	Fayette	William A. Bloom	Fayette
Jackson	7	Frederick J. McCoy	Kansas City	James W. Fowler	Kansas City
Jasper	8	John D. Maddox	Joplin	D. O. Allen	Joplin
Jefferson	4	F. L. Kozal	Crystal City	J. L. Mayfield	Crystal City
Johnson	6	A. L. Folkner	Warrensburg	Donald E. Frein	Leeton
Lafayette-Ray	6	Wilbur E. Fulkerson	Higginsville	William LaHue	Lexington
Lewis-Clark-Scotland	2	Earl Gilfillan	Memphis	Landis Y. Davis	Canton
Lincoln-St. Charles	4	Vincent Muenster	St. Charles	Robert J. Fleming	St. Charles
Marion-Ralls-Shelby	2	Wyeth Hamlin	Hannibal	John H. Walterscheid	Hannibal
Mid-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)	9	Rae W. Froelich	Lebanon	M. K. Underwood	Rolla
Miller	5			C. T. Buehler	Eldon
Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds)	10	A. G. Karraker	Farmington	C. W. Chastain	Farmington
Moniteau	5	K. S. Latham	California	L. M. Gallagher	California
Montgomery	5	E. J. T. Andersen	Montgomery City	Samuel J. Byland	Wellsville
Morgan	5	Jack Gunn	Versailles	J. Loren Washburn	Versailles
Northwest Missouri Medical Society (Nodaway-Holt-Atchison-Gentry-Worth)	1	John M. Wanamaker	Rock Port	Frank B. Matteson	Grant City
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Paul E. Hilton	Kirksville	Edward M. Grim	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)	8	Alan H. Bailey	Mount Vernon	Paul B. Anderson	Neosho
Pemiscot	10	J. D. Caldwell	Hayti	James Barnard	Caruthersville
Perry-Ste. Genevieve	10	Oscar Carron	Perryville	Joseph Lutkewitte	Ste. Genevieve
Pettis	6	Thomas J. Hopkins	Sedalia	E. M. Braverman	Sedalia
Pike	2	W. Joe Martin	Louisiana	E. K. Jackson	Clarksville
Platte	1	H. Graham Parker	Platte City	H. C. Thurman	Parkville
St. Louis City	3	David N. Kerr	St. Louis	Richard V. Bradley	St. Louis
St. Louis County	4	James R. Nakada	St. Louis	C. Howe Eller	St. Louis
Saline	6	Marvin Rohrs	Marshall	R. C. Haynes	Marshall
Semo County Medical Society (Stoddard-New Madrid-Mississippi-Scott)	10	John Dernoncourt	Charleston	Thelma C. Buckthorpe	Sikeston
South Central Counties Medical Society (Howell-Oregon-Texas-Wright-Douglas-Ozark)	9	Amos L. Coffee	Willow Springs	Rollin H. Smith	West Plains
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour
West Central Missouri Medical Society (Bates-Cass-Cedar-St. Clair-Vernon)	6	Carter W. Luter	Butler	Roy W. Pearse	Nevada

Towns, Counties and Component Societies

A

Adrian, Bates, West Central
Affton, St. Louis*
Albany, Gentry, Northwest Missouri
Altenberg, Perry
Appleton City, St. Clair, West Central
Aurora, Lawrence, Ozarks
Ava, Douglas, South Central

B

Ballwin, St. Louis*
Belton, Cass, West Central
Berkeley, St. Louis*
Bethany, Harrison, Grand River
Bloomfield, Stoddard, SEMO
Blue Springs, Jackson
Bolivar, Polk, Dallas-Hickory-Polk
Bonne Terre, St. Francois, Mineral Area
Boonville, Cooper
Bourbon, Crawford, Mid Missouri
Bowling Green, Pike
Branson, Taney, Ozarks
Braymer, Caldwell, Grand River
Brentwood, St. Louis*
Bridgeton, St. Louis*
Brookfield, Linn, Grand River
Browning, Linn, Grand River
Brunswick, Chariton
Buffalo, Dallas
Butler, Bates, West Central

C

Cabool, Texas, South Central
Cainsville, Harrison, Grand River
California, Moniteau
Camdenton, Camden
Cameron, Clinton
Canton, Lewis
Cape Girardeau, Cape Girardeau
Cardwell, Dunklin
Carrollton, Carroll, Grand River
Carthage, Jasper
Caruthersville, Pemiscot
Cassville, Barry, Ozarks
Centralia, Boone
Chaffee, Scott, SEMO
Charleston, Mississippi, SEMO
Chesterfield, St. Louis*
Chillicothe, Livingston, Grand River
Clarksville, Pike
Clayton, St. Louis*
Clinton, Henry
Columbia, Boone
Concordia, Lafayette
Crane, Stone, Ozarks
Creve Coeur, St. Louis*
Crystal City, Jefferson
Cuba, Crawford, Mid Missouri

D

Desloge, St. Francois, Mineral Area
DeSoto, Jefferson
Dexter, Stoddard, SEMO
Doniphan, Ripley, Butler-Ripley-Wayne

E

East Prairie, Mississippi, SEMO
Edina, Knox, North Central
Eldon, Miller
El Dorado Springs, Cedar, West Central
Elsberry, Lincoln
Everton, Jackson
Excelsior Springs, Clay

F

Farber, Audrain
Farmington, St. Francois, Mineral Area
Faucett, Buchanan
Fayette, Howard
Fenton, St. Louis*
Ferguson, St. Louis*
Festus, Jefferson
Flat River, St. Francois, Mineral Area
Florissant, St. Louis*
Forsyth, Taney, Ozarks
Fort Leonard Wood, Phelps, Mid Missouri
Fredericktown, Madison, Mineral Area
Frontenac, St. Louis*
Fulton, Callaway

G

Gallatin, Daviess, Grand River
Gashland, Clay
Gideon, New Madrid, SEMO
Gladden, St. Louis*
Glasgow, Howard
Glendale, St. Louis*
Gordonville, Cape Girardeau
Grandview, Jackson
Grant City, Worth, Northwest Missouri
Gravois Mills, Jackson
Greenfield, Dade, Barton-Dade

H

Hamilton, Caldwell, Grand River
Hannibal, Marion
Harrisonville, Cass, West Central
Hartville, Wright, South Central
Hayti, Pemiscot
Herculaneum, Jefferson
Hermann, Gasconade, Franklin-Gasconade-Warren
Hickman Mills, Jackson
Higginsville, Lafayette
Hillsboro, Jefferson
Holden, Johnson
Hornersville, Dunklin
Houston, Texas, South Central
Houstonia, Pettis
Humansville, Polk, Dallas-Hickory-Polk
Huntsville, Randolph, Chariton-Macon-Monroe-Randolph

I

Illmo, Cape Girardeau
Independence, Jackson
Ironton, Iron, Mineral Area

J

Jackson, Cape Girardeau
Jefferson Barracks, St. Louis*
Jefferson City, Cole
Jennings, St. Louis*
Joplin, Jasper

K

Kansas City, Jackson
Kennett, Dunklin
Kimmswick, Jefferson
King City, Gentry, Northwest Missouri
Kirksville, Adair, North Central
Kirkwood, St. Louis*
Knobnoster, Johnson
Knox City, Knox, North Central
Koch, St. Louis*

L

Ladue, St. Louis*
Lakeview Heights, Benton
Lamar, Barton
Leadwood, St. Francois, Mineral Area
Lebanon, Laclede, Mid Missouri
Lee's Summit, Jackson
Leeton, Johnson
Lemay, St. Louis*
Lexington, Lafayette
Liberty, Clay
Lockwood, Dade, Barton-Dade
Louisiana, Pike

M

Macon, Macon, Chariton-Macon-Monroe-Randolph
Malden, Dunklin
Maplewood, St. Louis*
Marceline, Linn, Grand River
Marshall, Saline
Marshfield, Webster
Marthasville, Warren, Franklin-Gasconade-Warren
Martin City, Jackson
Maryville, Nodaway, Northwest Missouri
Maysville, DeKalb, Grand River
Memphis, Scotland, Lewis-Clark-Scotland
Mexico, Audrain
Milan, Sullivan, North Central
Miller, Lawrence, Ozarks
Moberly, Randolph, Chariton-Macon-Monroe-Randolph
Monett, Barry, Ozarks
Montgomery City, Montgomery
Morehouse, New Madrid, SEMO
Morrisville, Polk, Dallas-Hickory-Polk
Mound City, Holt, Nodaway-Holt-Atchison-Gentry-Worth
Mountain Grove, Wright, South Central
Mountain View, Howell, South Central
Mount Vernon, Lawrence, Ozarks

N

Neosho, Newton, Ozarks
Nevada, Vernon, West Central
New Florence, Montgomery
New Haven, Franklin
New Madrid, New Madrid, SEMO
Noel, McDonald, Ozarks
Norborne, Carroll, Grand River
Normandy, St. Louis*
North Kansas City, Clay

O

Oak Grove, Jackson
Odessa, Lafayette
O'Fallon, St. Charles, Lincoln-St. Charles
Olivette, St. Louis*
Oran, Scott
Osceola, St. Clair, West Central
Overland, St. Louis*
Owensville, Gasconade, Franklin-Gasconade-Warren
Ozark, Christian, Ozarks

P

Pacific, Franklin
Palmyra, Marion
Paris, Monroe, Chariton-Macon-Monroe-Randolph
Parkville, Platte
Parma, New Madrid, SEMO
Pattonsburg, Daviess, Grand River
Pattonville, St. Louis*
Perryville, Perry
Piedmont, Wayne, Butler-Ripley-Wayne
Pine Lawn, St. Louis*
Platte City, Platte
Plattsburg, Clinton
Pleasant Hill, Cass, West Central
Poplar Bluff, Butler
Portageville, New Madrid, SEMO
Potosi, Washington, Mineral Area
Princeton, Mercer, Grand River

R

Raytown, Jackson
Reeds Springs, Stone, Ozarks
Republic, Greene
Rich Hill, Bates, West Central
Richmond, Ray, Lafayette-Ray
Richmond Heights, St. Louis*
Ridgeway, Harrison, Grand River
Robertson, St. Louis*
Rock Hill, St. Louis*
Rockport, Atchison, Northwest Missouri
Rolla, Phelps, Mid Missouri
Rosendale, Andrew

S

St. Ann, St. Louis*
St. Charles, St. Charles, Lincoln-St. Charles
St. Clair, Franklin
Ste. Genevieve, Ste. Genevieve, Perry-Ste. Genevieve
St. James, Phelps, Mid Missouri
St. Joseph, Buchanan
St. Louis City*
Salem, Dent, Mid Missouri
Salisbury, Chariton
Sappington, St. Louis*
Savannah, Andrew
Sedalia, Pettis
Sedgewickville, Bollinger
Senath, Dunklin

Seymour, Webster
Shelbina, Shelby, Marion-Ralls-Shelby
Shelbyville, Shelby, Marion-Ralls-Shelby
Shrewbury, St. Louis*
Sikeston, Scott, SEMO
Slater, Saline
Smithton, Pettis
Smithville, Clay
Springfield, Greene
Stanberry, Gentry, Northwest Missouri
Steele, Pemiscot
Steelville, Crawford, Mid Missouri
Stockton, Cedar, West Central
Strafford, Greene
Sullivan, Franklin
Sweet Springs, Saline

T

Tarkio, Atchison, Northwest Missouri
Thayer, Oregon, South Central
Tipton, Moniteau
Trenton, Grundy, Grand River
Troy, Lincoln

U

Union, Franklin
Unionville, Putnam, North Central
University City, St. Louis*

V

Valley Park, St. Louis*
Vandalia, Audrain
Versailles, Morgan

W

Wardell, Pemiscot
Warrensburg, Johnson
Warrenton, Warren, Franklin-Gasconade-Warren
Warsaw, Benton
Washington, Franklin
Waverly, Lafayette
Waynesville, Pulaski, Mid Missouri
Webb City, Jasper
Webster Groves, St. Louis*
Wellsville, Montgomery
Wentzville, St. Charles, Lincoln-St. Charles
West Plains, Howell, South Central
Wheeling, Livingston, Grand River
Willow Springs, Howell, South Central
Windsor, Henry
Winona, Shannon, Carter-Shannon
Winston, Daviess, Grand River

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* Member may belong to St. Louis County Medical Society or St. Louis Medical Society.

Alphabetical List of Members

A

Aaron, George A., Independence
Abel, Charles C., St. Louis
Abel, Oliver III, St. Louis
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Abell, Walter E., St. Louis
Abrams, Morris, St. Louis
Acker, Harry L., St. Louis
Ackerman, Lauren V., St. Louis
Adams, Howard D., Liberty
Adelman, Arthur, Kansas City
Adler, Benard C., St. Louis
Adler, Federico, Kansas City
Agee, Loren G., Kansas City
Agress, Harry, St. Louis
Ahern, Archibald M., St. Louis
Ahlefeld, Charles B., Kansas City
Ahlering, George H., Clayton
Ahlvin, Robert C., St. Louis
Aiken, George A., Marshall
Aiken, Richard F., Marshall
Aisenstadt, E. Albert, Kansas City
Aitken, Louis F., St. Louis
Aks, Daniel, Kansas City
Alberg, Marvin R., Kansas City
Alberts, Phillip S., St. Louis
Albrecht, Franklin H., St. Louis
Alden, Arthur M., St. Louis
Aldrich, James T., St. Louis
Alex, Morris, St. Louis
Alexander, Harry L., St. Louis
Allain, James J., N. Kansas City
Allaman, John M., Sarasota, Fla. (Member Buchanan County Medical Society)
Allan, James R., Excelsior Springs
Allbee, Roger H., Crystal City
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Allen, Claude J., Rich Hill
Allen, David O., Joplin
Allen, Erroll W., Carrollton
Allen, Henry C., Clayton
Allen, Hollis N., St. Louis
Allen, James H., St. Louis
Allen, Jerry H., Springfield
Allen, Joseph E., Columbia
Allen, Melvin A., St. Louis
Allen, Robert E., Kansas City
Allen, S. Lloyd, Kansas City
Allen, Willard M., St. Louis
Allen, William B., Kansas City
Allen, William C., Columbia
Allen, William E. Jr., St. Louis
Allen, William H., Nevada
Allison, James B., Springfield
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Alsup, Frederick F., Belen, N. M. (Member Ozarks Medical Society)
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Altheide, Harvey E., Ladue
Altheide, J. Paul, St. Louis
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Altringer, Arthur N., Kansas City
Alvis, Bennett Y., St. Louis
Alvis, Edmund B., St. Louis
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Ames, Mary B., St. Joseph
Ames, William H., St. Joseph
Ammatelli, Francis J., Kansas City
Anast, Constantine S., Columbia
Andersen, E. J. T., Montgomery City
Anderson, Paul B., Neosho
Anderson, Philip C., Columbia
Anderson, Raymond B., Kansas City
Anderson, Richard W., Kansas City
Anderson, William H., Fulton
Andrae, Robert L., Louisiana
Andrews, Berneil W., Kansas City
Andrus, Bailey C., Kansas City
Anstey, George, St. Louis
Anthony, Dallas, Springfield
Apicella, Frank V., Omaha, Nebr. (Member St. Louis Medical Society)
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Aquino, Philip J., Caruthersville
Archer, Perry C., Shelbyville
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Arney, William G., St. Louis
Arnold, Eugene L., St. Louis
Arnold, Herbert M., Lamar
Aronberg, Lawrence M., St. Louis
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Aschman, Theodore H., Kansas City
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Ash, Charles J., Springfield
Asher, A. Graham, Kansas City
Ashley, Hugh V., Cape Girardeau
Ashley, Hugh Jr., Cape Girardeau
Ashley, Thomas F., Springfield
Atcheson, Bellefield, Kansas City
Atkinson, Thomas E. Jr., Springfield
Atwell, Floyd C., Kansas City
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Auer, Edward T., St. Louis
Aufderheide, G. Russell, St. Louis
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Aull, John, Kansas City
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Averill, Keith H., Kansas City
Avery, Willard B., Boonville
Aylward, Howard J., St. Louis
Azuma, Nobutaka, St. Louis
Azzouni, J. N., St. Louis

B

Babka, Joseph J., St. Louis
Bach, Lysle M., Hannibal
Bachmann, Paul L., Independence
Backer, Matthias H. Jr., St. Louis
Backlar, Joseph, Los Angeles, Calif. (Member St. Louis County Medical Society)
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Baggot, Michael C., Granite City (Member St. Louis Medical Society)
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Bailey, Alan H., Mount Vernon
Bailey, Drennan, St. Louis
Bailey, Frank A., St. Louis
Bailey, William H., St. Louis
Baird, Keim L., St. Louis
Baker, A. Sherwood, Columbia
Baker, James M., Columbia
Baker, Josephine D., Moberly
Baker, Philip J., Kansas City
Baker, Warren C., Savannah
Balazs, Karl J., St. Louis
Baldwin, Paul, Kennett
Baldwin, Richard, Springfield
Bales, Eugene L., Carrollton
Balhuizen, John, Kansas City
Ball, James E., Kansas City
Ball, Thomas J. Jr., Bergenfield, N. J. (Member St. Louis Medical Society)
Ballard, V. Bryce, Kansas City
Bandle, Donald F., St. Louis
Banet, Samuel R., St. Louis
Banton, M. Roman, St. Louis
Banton, William C., St. Louis
Barbour, Marvin R., Poplar Bluff
Barden, Frank W., Creve Coeur
Bardenheier, J. Phil, St. Louis
Bare, Chester I. Jr., Raytown
Bare, Edward F., Tarkio
Bareis, Robert J., Marshfield
Barelli, Pat A., Kansas City
Barger, O. B., Harrisonville
Barker, Edward T., St. Louis
Barloon, James H., Grandview
Barnard, John L. Jr., Kansas City
Barnes, Robert H., Kansas City
Barnes, Seth S., Cape Girardeau
Barnett, Charles H., Bolivar
Barnett, Floyd A., Paris
Barnett, Gordon P., Kansas City
Barnett, Julian H., St. Louis
Barnett, Norman H., Joplin
Barnette, Eugene, St. Charles
Barone, Paul L., Nevada
Barrett, Scott R., St. Louis
Barrow, Jack, St. Louis
Barry, Gerald W., Kansas City
Barry, William B., Kansas City
Bartels, Leo G., St. Louis
Bartlett, Robert W., St. Louis
Bartlett, Willard Jr., Clayton
Bartnick, Mitchel L., St. Louis
Bascom, Charles H., St. Joseph
Baska, R. E., Kansas City (Member West Central Missouri Medical Society)
Bass, Billy J., Salem
Bass, Walter R., Kansas City
Bassett, Robert B., St. Louis
Bates, George C., Kansas City
Battersby, Richard S., Columbia
Baue, Arthur E., Philadelphia, Pa. (Member Boone County Medical Society)
Bauer, Harold A., Lockwood
Bauer, John D., St. Louis
Bauer, Joseph A., St. Louis
Bauer, Maria, Granite City, Ill. (Member St. Louis Medical Society)
Bauer, Otto, Granite City, Ill. (Member St. Louis Medical Society)
Bauer, Robert A., St. Louis
Baum, Frank E., Kansas City
Bauman, Henry C., Maryville
Baumann, A. R., Steelville
Baumann, William B., St. Louis
Baumgarten, Walter Jr., St. Louis
Baumhardt, Edward E., Kansas City
Bawell, Malcolm B., St. Louis
Bay, Merrill R., Blue Springs
Beal, Homer, Malden
Beam, Sim F., St. Louis
Beard, Daniel D., St. Louis
Beare, J. Byron, St. Louis
Beare, Lucia V., St. Louis
Beasley, L. Kenneth, St. Louis
Beato, David L., St. Louis
Beck, Paul M., St. Joseph
Beck, Rea, Mehlville
Becke, William G., St. Louis
Beckemeyer, W. Albert, Sedalia
Becker, Bernard, St. Louis
Becker, Edward J., St. Louis
Becker, George H., St. Louis
Becker, Richard R., Kansas City
Becker, Rolfe A., Kansas City
Becker, Stanley C., St. Louis
Beckett, Theodore C., Boonville
Beckette, Edmund S., St. Louis
Beckman, Donald E., St. Louis
Beecher, Sheldon B., Poplar Bluff
Beers, Ellsworth G., Seymour
Behrens, Donald T., Richmond Heights
Behrens, Gerald L., St. Louis
Beidle, Raymond J., St. Louis
Belden, Edgar A., Jefferson City
Belew, Joe E., New York, N. Y. (Member St. Louis Medical Society)
Belinson, Louis, Jefferson City
Bell, Robert M., St. Louis
Bell, William F., Lee's Summit
Benage, Clarence M., St. Louis
Benincasa, Anthony V., St. Louis
Benjamin, Durand, St. Louis
Benjamin, Richard D., St. Louis
Bennett, James D., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Benoit, Hector W. Jr., Kansas City
Benson, Leo J. Jr., Kennett
Benson, Scott C., St. Joseph
Berard, Louis N., St. Louis
Berenson, Sheldon E., Kansas City
Berg, Leonard, St. Louis
Berg, Ralph, St. Louis
Berger, Edward J., St. Louis
Bergman, Hugo F., St. Louis
Bergmann, John F., St. Louis
Bergmann, Martin, St. Louis
Bergmann, Victor H., Kansas City
Bergner, Grace E., St. Louis
Berland, Harry I., St. Louis
Berman, Joseph P., St. Louis
Berman, William, St. Louis
Bernard, Harvey R., St. Louis
Bernard, J. W., Caruthersville
Berndsen, Gerard H., Rock Hill
Berney, Francis J., St. Joseph
Bernreiter, Michael, Kansas City
Bernstein, Aaron M., St. Louis
Bernstorff, Paul H., St. Louis
Berry, Guy N., Kansas City
Berry, John W., Clayton
Berry, Maxwell G., Kansas City
Berry, Paul T., Troy
Bersche, Bertram L., St. Louis
Berwald, Irwin I., St. Louis
Bess, William E., Sedalia
Best, Robert, Higginsville
Bettonville, Paul J. Jr., St. Louis
Bickel, Vern T., Lamar
Biggs, Fred J. Jr., Poplar Bluff

Biggs, Harry L., Kansas City
Biklaes, Victor W., Kansas City
Bills, Marvin L., Kansas City
Bilsky, Nathan, St. Louis
Bindbeutel, Arthur H., St. Louis
Bindbeutel, Donald A., Wester Groves
Binder, Morton A., St. Louis
Bingham, Hal G., Columbia
Bircher, John L., St. Louis
Birenbaum, Aaron, St. Louis
Birney, William P., Hannibal
Birsner, Frank H., Carthage
Birsner, Louis J., St. Louis
Bishop, Marion D., Florissant
Bishop, Mary M., Ferguson
Bisno, Daniel, St. Louis
Black, Don A., Kansas City
Black, Eugene C., Kansas City
Black, James M., Carrollton, Ill.
(Member St. Louis County Medical Society)
Black, Samuel P. W., Columbia
Blacklock, David E., King City
Blackman, Nathan, Kirkwood
Blackmore, Thomas A., Windsor
Blades, Ross D., St. Louis
Blair, Vilray P. Jr., St. Louis
Blalock, Robert W., Marshall
Blalock, William N., St. Louis
Blankenship, Dale M., Cape Girardeau
Blankenship, George W., Neosho
Blanton, J. C., Sikeston
Bleyer, Adrien S., Webster Groves
Blim, Richard D., Kansas City
Block, Arnold S., St. Louis
Bloom, W. A., Fayette
Blunt, Charles P., St. Louis
Bock, Lux H., St. Louis
Bockelman, Clifford H., Brentwood
Boedeker, Roy V., St. Louis
Boemer, Lilburn C., St. Louis
Boger, James W., Sedalia
Boggs, Roy E., St. Louis
Bohne, William R., St. Louis
Bohnsack, Ralph W., Brookfield
Bohrer, Harry C., St. Louis
Boldizar, Albert G., St. Louis
Boldt, Thomas H., St. Louis
Boles, Clifford R., Clayton
Boley, James O., Kansas City
Bolgar, Bertalan, Festus
Bolinske, Robert E., Clayton
Bolton, Robert L., Milwaukee, Wis.
(Member St. Louis Medical Society)
Bond, Leslie F., St. Louis
Bondurant, Bryce H., St. Louis
Bonebrake, M. D., Springfield
Bonfanti, Albert L., St. Louis
Bonney, Samuel C., Washington
Boody, Robert J., Kansas City
Boone, Daniel S., Kansas City
Boone, Richard F., Hot Springs, Ark.
(Member Butler-Ripley-Wayne County Medical Society)
Bordy, Marvin D., Kansas City
Borenstine, Joseph, Kansas City
Bortnick, Arthur R., St. Louis
Boswell, John R., St. Louis
Boteler, George M., Kansas City
Botwin, Arnold E., Kansas City
Boucher, Robert E., St. Louis
Boughnou, Harvey P., Kansas City
Bouhasin, John D., St. Louis
Bourke, Timothy S., Kansas City
Boutros, Amin, Kansas City
Boveri, Joseph C., St. Louis
Bowdern, Edward H., Richmond Heights
Bowe, Edwin E., Jefferson City
Bowen, Stephen F. Jr., St. Louis
Bowerman, Harold H., St. Louis
Bowersox, Warren A., Pacific
(Member St. Louis Medical Society)
Bowles, G. Robert, St. Louis
Bowles, Richard P., Liberty
Bowles, William T., St. Louis
Bowman, Melvin C., Neosho
Bowser, John F., Kansas City
Box, Earnest M., Springfield
Boyd, Arthur M., St. Louis
Boyd, George K., Kansas City
Boydston, Catherine, Odessa
Boydston, W. Wayne, Odessa
Bozzo, Raymond J., Washington
Bradford, John F., Kansas City
Bradley, Frank R., St. Louis
Bradley, Richard V., Clayton
Bradley, William W., Farber
Bradshaw, W. D., Clinton
Brady, Charles H., Sedalia
Brady, Hugh S., Concordia
Brams, Jack B., Kansas City
Brand, Earl L., Webster Groves
Brandon, Walter L., Poplar Bluff
Brasher, Ben H., Lexington
Brasher, Charles A., Mount Vernon
Braufman, Harvey S., St. Louis
Braverman, Abe E., Kansas City
Braverman, Elliot M., Sedalia
Brazos, John C., Smithton
Bregant, Robert E., Jefferson City
Bremser, Harry L., St. Louis
Brennan, George A., St. Louis
Brennan, John A., Farmington
Brennan, Patricia A., St. Louis
Brennan, Raymond J., Chillicothe
Brennan, Robert A., St. Louis
Brennan, Robert V., St. Louis
Brenner, Paul A., Owensville
Brereton, Robert L., Kirkwood
Brewer, Lake, Ridgeway
Brewster, Charlotte M., Kansas City
Bricker, Eugene M., St. Louis
Bridgens, James G., Independence
Brielmaier, Charles R., St. Louis
Briscoe, John R., Maplewood
Bristow, Robert B., St. Joseph
Brock, Bernard, Windsor
Brodeur, Armand E., Kirkwood
Bronson, Shael S., St. Louis
Brooke, Clement E., Arcadia, Calif.
(Member Boone County Medical Society)
Brookes, Henry S. Jr., St. Louis
Brookes, Robert D., St. Louis
Brookreson, Alton F., Poplar Bluff
Brooks, Arthur C., St. Louis
Brooks, John M., Springfield
Brother, George M., St. Louis
Broun, Goronwy O., St. Louis
Broun, Goronwy O. Jr., St. Louis
Brown, Adrian J., Kansas City
Brown, Alex L., Springfield
Brown, Daniel W., San Diego, Calif.
(Member St. Louis Medical Society)
Brown, E. Eugene, St. Louis
Brown, Elwyn S., Kansas City
Brown, Eugene R., University City
Brown, Frederick B., Aurora
Brown, Irwin S., Kansas City
Brown, James B., St. Louis
Brown, James L., St. Louis
Brown, James T., Springfield
Brown, John J., Fulton
Brown, Katherine S., Fulton
Brown, Lyman D., Springfield
Brown, Robert S., Kansas City
Brown, Seymour, St. Louis
Brownfield, Samuel T., Brookfield
Brownsberger, Robert H., Appleton City
Broyles, Glen H., Kansas City
Broyles, Watkins A., Bethany
Bruce, Helen L., St. Louis
Bruce, James G., Jefferson City
Bruce, Leo A., Sikeston
Bruce, Paul C., Excelsior Springs
Brukardt, Diane, Columbia
Brumm, Lawrence W., Kansas City
Bruner, Claude R., Columbia
Bruner, Robert E., Kansas City
Bruns, Kenneth, University City
Brust, Carl H., Mission, Kan.
(Member Jackson County Medical Society)
Bryan, James H., Clayton
Bryan, William H. Jr., Kansas City
Bryan, William T. K., St. Louis
Bryant, Sydney L., St. Joseph
Bryant, William O., Hayti
Buckingham, William, Kansas City
Buckner, Robert C., Kansas City
Buckthorpe, Thelma C., Sikeston
Budd, John J. Jr., St. Louis
Budke, Harold A., Kansas City
Buehler, Carl T. Jr., Eldon
Buesseler, John A., Columbia
Bugg, Andrew F., Lordsburg, N. M.
(Member Mineral Area County Medical Society)
Bugg, George W., St. Louis
Buhler, Victor B., Kansas City
Buie, Bruce R., Kansas City
Bulger, Harold A., St. Louis
Bull, Ben M., Ironton
Bumgarner, James E., Columbia
Bumgarner, Roger W., Columbia
Bunting, Williston P., Kansas City
Burch, John E., Joplin
Burcham, Thomas R. Jr., Farmington
Burford, Cyrus E., St. Louis
Burford, Edwin K. Jr., Cape Girardeau
Burford, Thomas H., St. Louis
Burk, E. K., Kansas City
Burke, Robert J., St. Louis
Burkey, Jordan W., Springfield
Burkhardt, Edward F., St. Louis
Burmeister, R. William, St. Louis
Burney, Wallace S., Miller
Burns, Beryl I., Columbia
(Member Jackson County Medical Society)
Burns, Francis J., St. Louis
Burns, Francis R., Hannibal,
Burns, Thomas J., Houston
Burns, Thomas W., Columbia
Burnside, Charles R., Kirkwood
Burst, Donald O., St. Louis
Burstein, Robert, St. Louis
Busch, Anthony K., St. Louis
Busiek, Erwin F., Springfield
Busiek, Paul J., Springfield
Busiek, Urban J., Springfield
Bussmann, Donald W., St. Louis
Butcher, Harvey R. Jr., St. Louis
Butcher, Robert W., Kansas City
Butler, E. F., St. Joseph
Butterworth, Nelson S., Kansas City
Butts, James D., Rolla
Byars, Louis T., St. Louis
Byers, Philip L., Kansas City
Byland, Benjamin F., Maryville
Byland, Samuel J., Wellsville
Byrne, John E., St. Louis
Byrne, Paul A., St. Louis

C

Caciolo, Carlo, St. Louis
Cacioppo, Joseph E., St. Louis
Cadbury, Jane B., Chesterfield
Cadice, John B., St. Louis
Caffrey, Raymond J., Kansas City
Cain, Alvin R., Lamar
Cain, Charles F., Caruthersville
Caldwell, Fred, Poplar Bluff
Caldwell, Jacob D., Hayti
Caldwell, John K., Kansas City
Calkins, Delevan, St. Louis
Callahan, Donald E., Jennings
Callahan, Joseph D., St. Louis
Callaway, Guy D., Springfield
Callaway, Guy D. Jr., Springfield
Callihan, Charles F., West Plains
Calodney, Martin M., St. Louis
Calovich, Emery R., Kansas City
Camel, H. Marvin, St. Louis
Campbell, A. J., Sedalia
Campbell, Cecil S., St. Louis
Campbell, Edward D., Cape Girardeau
Campbell, Frederick B., Kansas City
Campbell, James E., Macon
Campbell, John G., Kansas City
Campos, Francisco J., St. Louis
Canaan, Samuel A. Jr., St. Louis
Canella, John M., Hannibal
Canepa, John B., St. Louis
Canlas, Emilio M., Poplar Bluff
Cannon, Edward M., St. Louis
Canty, Eugene J., St. Charles
Capetti, Alex P., Crane
Cappel, Powel B., St. Louis
Capps, Eugene C., Columbia
Caravelli, Anthony F., Downey, Ill.
(Member St. Louis Medical Society)
Carbaugh, Glenn C., Kansas City
Carleton, Charles E. Jr., Farmington
Carlin, Albert L., Stanberry
Carlin, M. Richard, St. Louis
Carlisle, John B., Sedalia
Carlson, Arne E., St. Louis
Carlson, Hjalmar E., Kansas City
Carmichael, Francis A. Jr., Kansas City
Carnes, Victor M., Joplin
Carney, Roscoe P., St. Louis
Carpenter, George T., St. Joseph
Carpenter, George W., Chillicothe
Carpenter, Wallace, Rockfort
Carr, Archie D., St. Louis
Carr, G. Thomas, St. Louis
Carrier, Edson C., Kansas City
Carrier, John A., St. Louis
Carrington, Howard W., Lebanon
Carroll, George A., St. Louis
Carroll, Grayson, St. Louis
Carroll, Percy J., Clayton
Carroll, Thomas W., Lamar
Carron, Oscar A., Perryville
Carter, Edwin E., Clayton
Carter, Howard, Hamilton

Carter, James R., Neosho
Carter, John F., St. Louis
Caruso, Alfred A., Kansas City
Cary, John M., St. Louis
Casady, Gilbert N., Paririe Village, Kan. (Member Jackson County Medical Society)
Casebolt, Buford T., Kansas City
Casebolt, Milton B., Kansas City
Casey, Shederic A., Lebanon
Cash, Charles R., Kennett
Cason, Elbert H., St. Louis
Cassel, Melvin A., St. Louis
Castelaw, Rush E., Kansas City
Catanzaro, Anthony F., St. Louis
Catanzaro, Francis J., St. Louis
Catanzaro, Rudolph E., St. Louis
Cavaness, Ernest W., Encinitas, Calif. (Member Jackson County Medical Society)
Centner, Paul J., Kansas City
Chalkley, Judson I., Columbia
Chamberlain, Gilbert L., Boonville
Chambers, James Q. Jr., Kansas City
Chamness, James T., St. Louis
Chandler, Robert A., Kansas City
Chapman, Arthur H., Kansas City
Chapman, Jean A., Cape Girardeau
Chapman, Jerry R., Steele
Chapman, Samuel B., Kansas City
Charles, Benjamin H., St. Louis
Charles, Cecil M., Clayton
Charnas, Raymond M., St. Louis
Chase, Ned B. Jr., Joplin
Chastain, Charles W., Farmington
Chastain, Maurice W., N. Kansas City
Cheng, Alfred K., San Francisco, Calif. (Member Jackson County Medical Society)
Chernoff, Selbert G., Kansas City
Cherre, Anthony J., St. Louis
Cherre, Charles J., St. Louis
Chesney, George W., Joplin
Chiasson, E. Chaille, Columbia
Chieffi, Margaret, St. Louis
Chiles, David R., Smithville
Chinsky, Murray, St. Louis
Christ, Martin H., St. Joseph
Christensen, Roger F., Louisiana
Christy, Raymond A., Springfield
Chute, W. Deward, Moberly
Ciampa, Thomas, St. Louis
Ciapciak, Stanley J., St. Louis
Cibis, Paul A., St. Louis
Clark, Chester L., Trenton
Clark, Clarence L., St. Louis
Clark, Harold B., Kansas City
Clark, Irving H., Kansas City
Clark, Kendall A., Jefferson City
Clarke, Michael J., Springfield
Clary, William F., Springfield
Claseman, Wilma W., St. Louis
Clasen, Arthur C., Miami Beach, Fla. (Member Jackson County Medical Society)
Clawson, James W., Springfield
Clayton, Edgar L., Springfield
Cleary, Frank, St. Louis
Cleveland, Horace F., Long Beach, Calif. (Member St. Louis Medical Society)
Clever, Henry W. Jr., St. Charles
Cline, Harold H., Piedmont
Cline, Merle A., Kansas City
Clisham, John F., Hannibal
Clithero, William H., Duarte, Calif. (Member St. Louis Medical Society)
Cloyd, Mason D., St. Louis
Coates, Thomas A., St. Louis
Coben, Lawrence A., St. Louis
Coburn, Donald F., Kansas City
Cochran, Donald Q., Columbia
Cochran, Jo R., Cape Girardeau
Cochran, Thomas E. Jr., Springfield
Cochrane, Joseph J., Kansas City
Cockerell, Sanford F., Independence
Coffee, Amos L., Willow Springs
Coffey, Ralph R., Kansas City
Coffin, Ernest L., Lakeworth, Fla. (Member St. Louis Medical Society)
Coffin, Theodore A., Kansas City
Coffman, Esther E. L., Lakeworth, Fla. (Member Ozarks Medical Society)
Cohen, Benjamin H., Clayton
Cohen, Frank, St. Ann
Cohen, Harry K., Kansas City
Cohen, Hilliard, Kansas City
Cohen, Louis, St. Louis
Cohle, Richard R., Carthage
Cohnberg, Rosellen E., Neosho
Cohrs, Clarence C., Moberly
Coil, Paul E., Mexico
Cokrhame, Jack, St. Louis
Coldwater, Kenneth B., St. Louis
Cole, William R., St. Louis
Coleman, William G., St. Louis
Colglazier, Mary C., Kansas City
Coller, Frederick B., Springfield
Collins, Gretchen D., Macon
Collins, John M., St. Louis
Collodi, George A., Brentwood
Colom, George A., Kansas City
Combs, Joe D., Nevada
Comeau, Richard A., Dexter
Comens, Phillip, St. Louis
Comens, Ruth C., St. Louis
Commerford, James J., Crystal City
Commerford, John F., St. Charles
Compton, James R., Whittier, Calif. (Member St. Louis County Medical Society)
Cone, Alfred J., Chesterfield
Connell, Evan S., Kansas City
Conrad, Adolph H. Jr., St. Louis
Conrad, Joseph A., Chillicothe
Conrad, Marshall B., Clayton
Conrad, Raymond C., Springfield
Cook, Jerome E., St. Louis
Cook, Ralph L., St. Louis
Cook, O. W., Caruthersville
Cook, Thomas B., Richmond
Cooper, Charles S., Kansas City
Cooper, Claude W., Thayer
Cooper, Henry T., St. Louis
Cooper, John H., Kansas City
Cooper, Lawrence E., Ft. Myers, Fla. (Member Pemiscot County Medical Society)
Cooper, Leo F., Kansas City
Cooper, Maurice E., Columbia
Cooper, R. Lee, Warrensburg
Cooper, Theodore, St. Louis
Cooper, Thomas J., St. Louis
Cope, James C., Columbia
Cope, Joseph S., Lexington
Copher, Glover H., St. Louis
Copp, Ralph Jr., St. Louis
Cordonnier, Justin, St. Louis
Correnti, Nicholas A., St. Louis
Cortner, Mary C., Kansas City
Cossins, Carlos E., St. Joseph
Costa, Dominic V., St. Louis
Costello, Cyril J., St. Louis
Costello, Joseph P. Jr., Brentwood
Costen, William S., St. Louis
Costrino, John J., University City
Costrino, Joseph A., St. Louis
Coughlin, Bertrand D., St. Louis
Counsell, Chester M., Kansas City
Cowan, R. D., Aurora
Cowan, Watt O., Greenfield
Cowdry, Edmund V. Jr., St. Louis
Cowherd, Joseph B., Kansas City
Cox, Kenneth E., Kansas City
Cox, Mary E., St. Louis
Cox, William A., Jefferson City
Coxe, William S., St. Louis
Cozart, Duane E., University City
Craig, Irwin T., Joplin
Craig, Owen W. D., St. Joseph
Craig, Richard O., St. Joseph
Cramb, Arthur B., Lakeland, Fla. (Member North Central Counties Medical Society)
Crawford, Archie L., Joplin
Crawford, Katherine J., University City
Crawford, Oral B., Springfield
Crawford, Robert M., Sullivan
Creech, Joseph C., Troy
Crego, Clarence H. Jr., St. Louis
Cremer, William J., Fulton
Cresswell, George F., Potosi
Crews, Robert N., Fulton
Crider, Russell J., St. Charles
Criscione, James R., St. Louis
Crispell, Lawrence S., Joplin
Critchlow, William C., Sikeston
Crites, Edward, Sedgewickville
Crocker, Albert M., Kansas City
Crockett, James E., Kansas City
Croom, Dorwyn W., Malden
Crosby, Alice S., Salem
Cross, Albert D., Trenton
Crossman, Robert W., Webster Groves
Crotty, John P., St. Louis
Crouch, F. Richard, Farmington
Crow, Asa A., Cardwell
Crowe, John T., Cape Girardeau
Crowell, Hugh C., St. Louis
Crozier, Franklin A., Richmond
Cruvant, Bernard A., St. Louis
Culbertson, William F., Kansas City
Cullers, Charles H., Trenton
Cullum, Albert G. J., Middlesboro, Ky. (Member St. Louis County Medical Society)
Cummings, James H., St. Louis
Cunningham, Darral D., Springfield
Curran, Desmond, Kansas City
Curran, Herbert A., St. Joseph
Curts, Calvin J., Kansas City
Cutliff, Daniel J., Kansas City
Cutler, Harold M., St. Louis
Cutler, Harry, St. Louis
Czebrinski, Edward W., St. Louis

D

Daake, John W., St. Louis
Dabbs, LeRoy, St. Louis
Dahms, Gustave, St. Louis
Daley, Frank R., Hamilton
Dalton, Arthur R., St. Louis
Dalton, Timothy T., Kansas City
Daman, George A., St. Louis
Dames, Richmond J., St. Louis
Damron, E. O., Elsberry
Damron, Oscar H., Warrensburg
Danis, Peter G., St. Louis
Dankner, Arnold, Clayton
Dann, David S., Kansas City
Darnell, Thomas F. B., Columbia
Dash, Udaya Nath, St. Louis
Daughaday, William H., St. Louis
Daum, Harold F., Sedalia
Davault, George K., Richmond
Davenport, James F., Columbia
Davidson, John D., St. Louis
Davidson, Morris, Clayton
Davie, Joseph, St. Louis
Davis, C. Braxton, Nevada
Davis, Donald R., Kansas City
Davis, Edgar W., St. Louis
Davis, Frank L., St. Louis
Davis, Herbert V., Kansas City
Davis, Irl R., St. Louis
Davis, Jack M., Kansas City
Davis, John J., Overland Park, Kan. (Member Jackson County Medical Society)
Davis, Kenneth A., Kansas City
Davis, Landis Y., Canton
Davis, Leonard L. Jr., Mexico
Davis, Martin. W., St. Louis
Davis, Robert C., Kansas City
Davis, Wilbur L., Charleston
Day, Anthony B., Marshall
Day, Maxwell, St. Joseph
Deakin, Rogers, St. Louis
Dean, Francis D., Fayette
Dean, Lee W. Jr., St. Louis
Decker, Albert I., Kansas City
DeGenova, G. H., Ste. Genevieve
DeHovitz, Bernard, St. Louis
Deininger, James V., Springfield
Deitchman, Robert B., St. Louis
de la Torre, John J., Sullivan
Delzell, William A., Springfield
DeMaria, Peter F., Kansas City
Demko, William, St. Louis
DeMott, John D., Kansas City
DeMotte, John A., Kansas City
Dempsey, D. T., Kennett
Dempsey, Kenneth J., Milwaukee, Wis. (Member St. Louis Medical Society)
Denk, Alan F., St. Louis
Denney, Richard W., Mountain Grove
Denninghoff, James C., Columbia
Dennis, W. Paul, Flat River
Denny, H. M., Union
Denton, Jimmy E., Ventura, Calif. (Member Buchanan County Medical Society)
DePaoli, Frank J. Jr., Boston, Mass. (Members St. Louis Medical Society)
Dernoncourt, John E., Charleston
DeTar, Burleigh E., Joplin
DeTar, B. E. Jr., Joplin
Deutch, Max, St. Louis
Devine, John B., St. Louis
Devine, Joyce E., St. Louis
Devins, George S., Kansas City
Dewald, Paul A., St. Louis
Deweese, Everett R., Kansas City
Dewein, Edward G., West Point, N. Y. (Member St. Louis Medical Society)
Dexheimer, Frank R., Columbia
Deyton, John W., St. Louis
Dickerson, Omar B., St. Louis

Dickler, Donald J., St. Louis
Dieckman, William C., Dexter
Diehr, Alvin H., St. Louis
Diehr, Maurice A., St. Louis
Diekroeger, Manuel L., Boonville
Diemer, Peter A., St. Louis
Dietrich, Karl D., Columbia
Dietz, M. Wendell, Springfield
DiLeo, Senatro W., Jennings
Dill, Foster A., Maplewood
Dillard, Burl M., St. Louis
Dillard, Erin M., Springfield
Dills, Joseph N., Springfield
Dinelli, Frank E., Poplar Bluff
Diveley, Rexford L., Kansas City
Dixon, John R., Brockfield
Dixon, Otto J., Kansas City
Dixon, Vewiser L., Kansas City
Dlabal, Luke J., Independence
Dmytryk, Eugene T., St. Louis
Doane, William L., Grandview
Dodd, Robert B., St. Louis
Dodge, Mark, Kansas City
Dodge, Milton, Shawnee Mission, Kan. (Member Jackson County Medical Society)
Doering, Robert W., Kansas City
Doggett, Sylvester, Sikeston
Doisy, Robert A., Glendale
Dolan, Daniel L., Springfield
Dolan, John T. Jr., St. Louis
Dolezal, Joseph B., Kansas City
Donahce, James L., St. Louis
Donaldson, Robert C., St. Louis
Donati, Robert M., St. Louis
Donley, Leo F. Jr., St. Louis
Donley, Robert R., Monett
Donnell, Harold E., DeSoto
Donnell, Robert H., Crystal City
Donnell, Thomas A., DeSoto
Donovan, William T., St. Louis
Dorsch, Ervin H., Independence
Dorsett, E. Lee, Indianola, Miss. (Member St. Louis Medical Society)
Douglass, Jesse E., Kansas City (Member Jasper County Medical Society)
Dowd, James F. Jr., St. Louis
Dowell, Donald M., Chillicothe
Dowell, J. Larry, Pattonsburg
Downey, James W., Kansas City
Doyle, Charles R., St. Louis
Doyle, Matthew J., Jefferson City
Drace, Charles C., St. Louis
Drace, Charles C. Jr., St. Louis
Drake, Avery A., Rolla
Drake, Roy F., Kansas City
Drake, Truman G., St. Louis
Drake, William L. Jr., St. Louis
Draney, Thomas E., Kansas City
Drennan, James A., San Leandro, Calif. (Member St. Louis Medical Society)
Drescher, Emmett B., St. Louis
Drews, Robert C., St. Louis
Drey, Norman W., St. Louis
Dreyer, Carl J., Webster Groves
Dreyer, Philip V., Huntsville
Dreyer, William F., Houston
Drisko, Robert M., Kansas City
Drowns, Bruce V., Kansas City
Drum, Helen M., Clayton
Dubuque, Theodore J. Jr., St. Louis
Duden, Charles W., St. Louis
Duemler, John H., Gladden
Duemler, Robert H., St. Louis
Duer, Mildred C., Kansas City
Duffy, Francis G., St. Louis
Duffy, Oliver F., Trenton
Duggan, John J. Jr., Kirkwood
Dulick, Michael, Brentwood
Duling, Gerald J., St. Charles
DuMont, Clement C., St. Joseph
DuMontier, R. J., O'Fallon
Dunaway, Howard A., Sikeston
Duncan, Ralph E., Kansas City
Duncan, Robert D., Springfield
Duncan, William H., Kansas City
Dunham, R. H., N. Kansas City
Dunleavy, James D., Kansas City
Dunmire, George Q., Kennett
Dunn, Robert E., St. Louis
Dunshee, Robert E., Maryville
Durnell, Monaford D., Lee's Summit
Durst, Henry, Fulton
Dworkin, Saul, St. Louis
Dwyer, Frank X., Kansas City
Dwyer, Hugh L., Kansas City
Dwyer, Reinhardt D., N. Kansas City
Dwyer, Thomas L., Mexico
Dyer, Dallas J., St. Louis
Dyer, David P., Sedalia

E

Eades, Dee W., St. Louis
Eagleton, Mark D., Clayton
Eanet, Morton P., Kansas City
Earp, Ralph K., St. Louis
Eastwood, Robert A., Springfield
Ebel, Eugene H., St. Louis
Eber, Carl T., St. Louis
Eberle, John P., St. Louis
Eberle, Vincent L., St. Louis
Echterhoff, Harry R., St. Louis
Eck, Birkle, St. Louis
Ecker, Decider, Pacific
Eckert, Clarence T., St. Louis
Ecklund, Archibald M., San Diego, Calif. (Member St. Louis Medical Society)
Ector, Henry J., Mexico
Edde, Clifford G., Kansas City
Edele, Eugene H., St. Louis
Edmonds, Devilla D., Leawood, Kan. (Member Jackson County Medical Society)
Edwards, D. R., Sedalia
Edwards, Francis L., Monett
Edwards, Joseph C., St. Louis
Edwards, Theodore F., Kansas City
Edwards, Waldo B., Kirkwood (Member Jefferson County Medical Society)
Efron, Joseph, Olivette
Egan, Thomas F., St. Louis
Eggers, George W. N. Jr., Columbia
Eggleston, D. E., Macon
Egley, Loren E., St. Louis
Eidelman, Jack R., St. Louis
Eigel, Edwin G., St. Louis
Eimer, Charles E., St. Louis
Eisemann, Gustave, Kansas City
Eisenmann, Benjamin P., New Haven
Eisenstein, Albert B., St. Louis
Eklund, Alfred W., Pleasant Hill
Elam, James O., Kansas City
Elders, Frank A. Jr., Cuba
Eldridge, Charles J., Kansas City
Elias, David J., Independence
Eliscu, Juliette, Joplin
Elkins, Ronald F., Springfield
Eller, C. Howe, Clayton
Ellersieck, Dorothy M., St. Louis
Ellett, William H., Appleton City
Elliott, James R., Pasadena, Calif. (Member Jackson County Medical Society)
Elliott, Raymond G., Kansas City
Elliott, Wade E., Kansas City
Ellis, Burnett E., Gideon
Ellis, Calvin C., St. Louis
Ellis, Elmer F., Kansas City
Ellis, Francis J., Springfield
Ellison, Leroy E., Maplewood
Ellsworth, Willard, Cainsville
Elrod, Dennis B., Cape Girardeau
Elser, Otto H., Independence
Elson, Julius, Ladue
Emerson, Reynolds L., Brentwood
Endlich, Harold L., Kansas City
Engel, Lawrence P., Kansas City
Engelhardt, Robert C., Poplar Bluff
Engelking, David F., Kansas City
English, Milton T. Jr., Kirksville
English, Wallace D., Cardwell
Engman, Martin F. Jr., St. Louis
Enloe, Lawrence D., Jefferson City
Epp, George J., St. Louis
Epple, Kathryn C., Mexico
Epple, Lawrence K., Mexico
Erlanger, Joseph, St. Louis
Ernst, Edwin C., St. Louis
Ernst, Edwin C. Jr., St. Louis
Ernst, Joseph G., Oakland
Ernst, Richard E., St. Louis
Ernst, Roland P., St. Louis
Eshelman, Albert D., Independence
Eskeles, Irwin H., St. Louis
Esslinger, Arthur T. J., St. Louis
Estes, Albert M., Cape Girardeau
Estes, Jack M., Ferguson
Eto, Jackson, St. Louis
Eubank, David F., Kansas City
Eubank, Dillard M., Raytown
Eubank, William R., Kansas City
Eubank, William Y., Kansas City
Evans, A. McChesney, Columbia
Evans, Ezra L. Jr., Springfield
Evans, Harry T., Branson
Eversoll, Norton J., Hollywood, Fla. (Member St. Louis County Medical Society)
Ewert, J. O., Sedalia
Exon, C. Stuart, Jefferson City
Eyermann, Charles H., St. Louis
Eyermann, H. Walter, Warrenton

F

Fakhoury, Donald A., Kansas City
Fair, William L., Chillicothe
Fairchild, James F., Perryville
Fairshter, Alex E., St. Louis
Falk, O. P. J., St. Louis
Fallet, Charles E., DeSoto
Faris, Tanous D., St. Louis
Farley, Claude C., Kansas City
Farley, William M., St. Louis
Farney, Jacob P., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Farnsworth, Jesse J., Kansas City
Farrar, Charles B., Cape Girardeau
Farrell, Robert J., St. Louis
Farthing, Fred R., Springfield
Farthing, Gene W., Springfield
Feierabend, Frank L., Kansas City
Feind, Earl E., Rolla
Feinstein, Leon A., St. Louis
Feist, George V., Kansas City
Feldaker, Robert M., St. Louis
Feldman, David, Clayton
Feller, C. E., Springfield
Feller, Harold H., St. Louis
Fellhauer, Carl M., St. Louis
Feltz, L. W., Perryville
Ferguson, Donald S., Kansas City
Ferguson, James T., Kansas City
Ferguson, John P. Jr., Springfield
Ferguson, L. H. Jr., Joplin
Ferguson, Luther J., St. Joseph
Ferguson, Ralph L., Joplin
Ferguson, Robert M., Webb City
Ferguson, Thomas B., St. Louis
Ferguson, Wilson J., Sikeston
Ferrara, John P., St. Louis
Ferrell, Thomas E. Jr., Springfield
Ferris, Carl R., Kansas City
Ferro, Anthony L., St. Louis
Fessenden, Ersel M., Springfield
Finger, Donald H., St. Louis
Fingerhood, Marvin G., St. Louis
Fingert, Hyman H., St. Louis
Fink, LeRoy L., St. Louis
Finkel, Barney W., St. Louis
Finkle, Robert H., Independence
Finley, Freeman L., St. Louis
Finn, Murray E., St. Louis
Finnegan, Joseph V., St. Louis
Finney, William O., Chaffee
Fischer, Edward H., N. Kansas City
Fischer, Erich, St. Louis
Fischer, Theodore, Altenburg
Fischer, Thomas J., Hannibal
Fish, Virgil O., St. Louis
Fisher, George E., Lebanon
Fisher, Joseph L., St. Joseph
Fisher, Stanley D., Sedalia
Fitch, C. H. Max, Springfield
FitzGerald, Leo P., University City
Fitzgerald, Robert H., Independence
Fitzgerald, William T., St. Louis
Flance, Israel J., St. Louis
Flanders, Virgil E., Kansas City
Flanigan, George D. Jr., St. Louis
Flatley, John A., Kansas City
Flavan, David B., St. Louis
Fleishman, Alfred, St. Louis
Fleming, J. Will, Moberly
Fleming, Paul D., Waterloo, Ill. (Member St. Louis County Medical Society)
Fleming, Robert J., St. Charles
Fleming, Royall B., Kansas City
Fleming, Thomas S., Moberly
Fletes, James W., St. Louis
Florian, Albert J., Kansas City
Flotte, Bernard H., St. Louis
Flotte, Sylvester A., St. Louis
Flynn, Edward P., St. Louis
Flynn, John T., St. Louis
Flynn, Joseph E., St. Louis
Flynn, Thomas T., St. Louis
Focht, Ralph H., Strafford
Folck, William P., Kansas City
Folkner, A. L., Warrensburg
Ford, Lee T. Jr., St. Louis
Ford, Walter W., Gordonville

Ford, William, Farmington
Foreman, Phillip B., Hannibal
Forgrave, John R., St. Joseph
Forgrave, Leon P. St. Joseph
Forman, George W., St. Joseph
Forman, Louis H., Kansas City
Forsen, James A., St. Louis
Forsman, Waldo W. Jr., St. Louis
Forster, Armand C., St. Louis
Forsyth, B. Todd, St. Louis
Forsythe, Robert W., Kansas City
Forti, John J., St. Louis
Foster, Howard M., St. Louis
Foster, Jack L., Desloge
Foster, Leon, St. Louis
Fouts, Dallas B. Sr., Independence
Fowler, Fred D., Kansas City
Fowler, I. Charles, N. Kansas City
Fowler, James W., Kansas City
Fowler, Marvin L., West Plains
Fox, Leon J., St. Louis
Fox, Robert E., St. Louis
Frain, Marie M., Farmington
Frame, Homer G., Springfield
Francis, William C., Springfield
Francka, W. F., Hannibal
Frank, Alvin R., St. Louis
Franklin, Curtis U., Kansas City
Franklin, Harold A., St. Louis
Franklin, Max S., St. Louis
Fraser, Richard A., Richards Gebaur A.F.B. (Member St. Louis Medical Society)
Frawley, Thomas F., St. Louis
Frazier, Robert L., Charleston
Fredeen, Robert C., Kansas City
Frederick, Raymond O., St. Louis
Freedman, Harold, St. Louis
Freedman, Ruth S., St. Louis
Freeman, David M., St. Louis
Freeman, Spencer L., Kirksville
Freiheit, Harold J., St. Louis
Freimuth, L. E., St. Louis
Frein, Donald E., Leeton
Frerking, Herbert W., St. Louis
Freund, H. G., Jefferson Barracks (Member Callaway County Medical Society)
Freund, Samuel J., St. Louis
Frick, John P., Kansas City
Friedenberg, Marvin J., St. Louis
Friedman, Bernard, St. Louis
Friedman, Morris L., Kansas City
Friedman, Paul L., St. Louis
Friedman, Robert H., St. Louis
Friedrich, Ernst R., St. Louis
Fries, Armand D., St. Louis
Fries, John W., St. Louis
Friskel, Arthur K., St. Louis
Fritsch, Andrew J., Joplin
Fritzlen, Thomas J., Kansas City
Froelich, Edwin J., Lebanon
Froelich, Rae W., Lebanon
Froelich, Robert E., Columbia
Fryer, Minot P., St. Louis
Fuchs, George J., Creve Coeur
Fuchs, George J. Jr., Columbia
Fuhrman, Donald L., Kansas City
Fulkerson, Wilbur E., Higginsville
Fulks, Richard B., California
Fullgrabe, Emil A., Jefferson City
Fulton, Albert E., Kansas City
Funsch, Robert E., St. Louis
Furla, Gus J., St. Louis
Furlow, Leonard T., St. Louis
Fury, Tex E., Kansas City
Fuson, Levi H., St. Joseph
Fuson, William A., Trenton

G

Gaebe, Harold C., Desloge
Gaffney, Caldwell J., St. Louis
Gafney, George T., St. Louis
Gagliardo, Joseph, St. Louis
Gaines, Quentin M., Kirkwood
Gainey, Harold L., Kansas City
Galbol, Harley, Excelsior Springs
Gale, Arthur H., Overland
Gale, Joseph F., Chillicothe
Gale, Philip R., St. Louis
Galeota, William R., Columbia
Gall, Ira, Clayton
Gallagher, Lionel M., California
Gallagher, Neil I., St. Louis
Gandlmayr, Jack M., St. Louis
Ganley, William C., Kansas City
Ganloser, Wilbert M., Clayton
Gantner, George E., Jr., St. Louis
Gantt, Ernest S. Jr., Mexico
Gantz, John A., Affton
Garcia, Charles L., Mexico
Gard, Raymond F., Independence
Gardner, Joseph W., Reeds Spring
Garfinkle, Bernard T., St. Louis
Garner, Lynn M., Jefferson City
Garrett, Glen H., Columbia
Garrison, Roy F., Kansas City
Garrison, T. W., Camdenton (Member Mid-Missouri County Medical Society)
Gary, George, Marceline
Gaskins, Charles W., Fredericktown
Gaskins, John H., Kansas City
Gaston, Ralph E., St. Louis
Gauer, Robert J., Kansas City
Gaunt, Frank P., Webster Groves
Gaunt, William D., Columbia
Gay, Andrew J., St. Louis
Gay, Elizabeth K., St. Louis
Gay, George, Ironton
Gay, George R., Columbia
Gearhart, Merriam, Bethany
Gearhart, Wilbur H., St. Louis
Gedney, William B., Valley Park
Geha, Braham J., Kansas City
Geise, August W. Jr., St. Louis
Geisler, Gerald F., St. Louis
Gempel, Paul A., Kansas City
Gentry, Enoch N. Jr., Kansas City
Gentry, Marvin C., Ava
Gentry, Merritt L., Chillicothe
Gentsch, Kenneth W., St. Louis
German, Walter A. Jr., Springfield
Gernstetter, Sangwill L., Poplar Bluff
Gerst, Aloysius C., St. Louis
Gibson, David M., Kansas City
Gibson, Helen F., St. Louis
Gibstine, Marvin H., St. Ann
Giddings, Frank C., Springfield
Giem, Ross N., Sullivan
Gieselman, Ralph V., St. Louis
Giesler, Donald H., Osceola
Gilcrest, Harry R., St. Louis
Gildea, Edwin F., St. Louis
Glidea, Margaret C. L., St. Louis
Gilden, Jerome J., St. Louis
Gilfillan, Earl E., Memphis
Gilkey, Harry M., Kansas City
Gillespie, Roy, Branson
Gillespie, William J., St. Louis
Gilmore, Frank P., St. Louis
Gilpin, Doris C., St. Louis
Ginardi, Donald E., Kansas City
Ginsberg, Norman A., Kansas City
Gish, Rutledge, Fulton
Gissy, Charles J., St. Louis
Gist, William W., Kansas City
Gitt, Joseph J., St. Louis
Gladney, John H., St. Louis
Glascock, Donald W., Palmyra
Glaser, Martin J., St. Louis
Glass, Robert L., St. Louis
Glass, William J. Jr., Monett
Glassberg, Bertrand Y., St. Louis
Glasscock, Ernest L., Kansas City
Glenn, Elmer E., Forsyth
Glenn, Robert R., Springfield
Glennon, William P., St. Louis
Glick, Harry N., St. Louis
Glover, Kenneth, Mount Vernon
Gnade, Albert J., St. Louis
Goebel, Joan M., St. Louis
Goell, Robert S., St. Louis
Goettman, William I., St. Louis
Goldberg, Isadore E., Braymer
Goldenberg, Sidney, St. Louis
Goldenson, Max J., St. Louis
Goldfarb, Alvin, Olivette
Goldkamp, John D., St. Charles
Goldman, Alfred, St. Louis
Goldman, Arnold M., St. Louis
Goldman, Hyman J., St. Louis
Goldman, Melvin L., St. Louis
Goldman, Stanley L., Kansas City
Goldring, Sidney, St. Louis
Goldsich, Edward, Kansas City
Goldstein, Bernard, St. Louis
Goldstein, Marcy A., St. Louis
Goldstein, Marvin F., Kansas City
Gollub, Samuel W., St. Louis
Gomez, Cesar A. Jr., St. Louis
Gonser, Karl B., Sedalia
Gonzalez, M. Garza, Warrensburg
Goodman, J. N., Glendale
Goodman, LeRoy, Kansas City
Goodman, Nathaniel, St. Louis
Goodrich, Harold A., Webster Groves
Goodson, William H. Jr., Kansas City
Goolsbee, Robert L., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Gordon, James S., Jefferson City
Gordon, Morris P., Kansas City
Gorelick, David F., Springfield
Gorham, Arwin E., Newberry, Mich. (Member St. Louis Medical Society)
Gorla, Wayne O., St. Louis
Gorrell, Ned B., Nevada
Gose, Don F., Springfield
Gottsch, Joseph C., Prairie Village, Kan. (Member Jackson County Medical Society)
Gowen, Leo F., St. Louis
Goyer, Robert A., St. Louis
Grabau, Gene H., St. Louis
Grable, James D., Portageville
Grabske, Charles F., Independence
Grabske, Charles F. Jr., Independence
Graeser, Richard G., St. Louis
Graham, James W., Kansas City
Graham, Wallace H., Kansas City
Graneto, Joseph A., St. Louis
Grant, Albert J., Hannibal
Grant, Claude S., St. Joseph
Grant, John M., St. Louis
Grant, Neville, St. Louis
Grant, Samuel B., St. Louis
Grauerholz, James W., Kansas City
Graul, Elmer G., St. Louis
Graul, Walter P., St. Louis
Graves, Arthur J., Mount Vernon
Graves, F. Burton, Joplin
Gray, Walter C., St. Louis
Greaney, John F., St. Louis
Grebel, Clement B., St. Louis
Greditzer, Arthur S., St. Louis
Green, D. M., St. Louis
Green, John R., Independence
Green, John R., Independence
Green, Manuel E., St. Louis
Green, Stanley L., Independence
Green, William R., St. Louis
Greenberg, Charles, Los Angeles, Calif. (Member Buchanan County Medical Society)
Greene, Harry L., Hannibal
Greene, W. Wallace, Kansas City
Greenman, Marshall B., Clayton
Gregory, Ralph W., Kansas City
Gresick, Robert J., St. Louis
Griege, Charles W., Florissant
Griffin, Mary E., Buffalo
Griffin, Olin A. Jr., Buffalo
Griffin, William T., Columbia
Griffith, John A. Jr., Kansas City
Griggs, James Y., St. Louis
Grim, Edward M., Kirksville
Grimes, Manning E., St. Joseph
Grindon, Joseph B., St. Louis
Griot, Albert J., St. Louis
Groce, George, Fulton
Grogan, Frank M., St. Louis
Gronau, Axel R., St. Louis
Grossman, Marvin, Fredericktown
Grove, Gulp W., Knobnoster
Growdon, John A., Kansas City
Grubb, Paul H., Joplin
Grueb, Paul M., St. Louis
Gruenfeld, Gerhard E., St. Louis
Grundmann, William H., St. Louis
Gubin, Alan S., Caruthersville
Guccione, Joseph B., St. Louis
Guffey, Don C., Kansas City
Guhleman, Henry V. Jr., Jefferson City
Guldner, Edmond, Lamar
Gulick, Charles R., St. Louis
Gullett, Charles C., Kansas City
Gum, William R., St. Louis
Gummels, Belmont B., St. Louis
Gundle, Sigmund, Kansas City
Gunn, Jack, Versailles
Gunn, Richard W., Kansas City
Gunn, Walter T., St. Louis
Gunter, Joe S., St. Joseph
Gurnee, Landon H., Jefferson City
Guze, Samuel B., St. Louis
Gzell, Ronald, St. Louis

H

Hackett, Paul R., St. Louis
Hackmeyer, Rubin, St. Louis
Haddock, James N., Webster Groves
Haffner, Heinz, St. Louis
Hagan, Daniel J., St. Louis
Hagebusch, Omer E., St. Louis
Hagemann, Paul O., St. Louis
Haggen, Margaret E., Kansas City

Hahn, Andrew L., Springfield
Haight, John M., Kansas City
Haith, Edward E., Kansas City
Haith, Walter F., Kansas City
Hall, Andy Jr., St. Louis
Hall, David G., Columbia
Hall, David W., Springfield
Hall, Durward G., Springfield
Hall, Eugene W., Ferguson
Hall, Frank W., Cape Girardeau
Hall, James W., Kansas City
Hall, Lee A., Clayton
Hall, Marvin F., Joplin
Hall, Preston C., St. Louis
Hall, Ralph R., Kansas City
Hall, Robert A., St. Louis
Hall, Thomas B., Kansas City
Hall, William K., St. Louis
Halperin, Phillip H., Kansas City
Halpern, Lawrence K., St. Louis
Hamel, Herbert A., Kansas City
Hamill, Robert W., Kansas City
Hamilton, Caldwell K., Clayton
Hamilton, Eugene G., Clayton
Hamilton, Eugene H., Joplin
Hamilton, William P., Aurora
Hamlin, Wyeth, Hannibal
Hammes, Romar E., St. Charles
Hammler, Christiana V., St. James
Hammond, John J., St. Louis
Hampton, Henry E., St. Louis
Hampton, Oscar P., Jr., St. Louis
Hampton, Stanley F., St. Louis
Hanan, Ernest B., Springfield
Handler, Eric, St. Joseph
Handler, Fred P., Jefferson City
Hanes, Lee D., Kansas City
Hanes, Robert L., Kansas City
Hankin, Norman M., St. Louis
Hanlon, C. Rollins, St. Louis
Hanlon, Russell C., Columbia
Hanna, Richard E., St. Louis
Hansbrough, Eugene T., Poplar Bluff
Hansel, French K., St. Louis
Hansen, Arthur L., Butler
Hanser, S. Albert, St. Louis
Hanser, Theodore H., St. Louis
Hanss, Armand W., Springfield
Hardacre, Ruth A., Kansas City
Hardin, William B. Jr., St. Louis
Hardwicke, Henry M., Jefferson City
(Member Boone County Medical Society)
Hardy, Guerdan, Clayton
Hardy, Henry M., Kansas City
Hardy, John W., Kansas City
Hardy, Joseph A. Jr., St. Louis
Harell, Alex, St. Louis
Harford, Carl G., St. Louis
Harkins, William B., St. Louis
Harkness, Harry, Warrensburg
Harland, R. E., Ironton
Harless, Morris S., Kansas City
Harms, Florian L., Salisbury
Harned, Bert W., Kansas City
Harner, Casper G., St. Joseph
Harper, Fleming B., St. Louis
Harrell, Henry J., Morrisville
Harrington, William J., St. Louis
Harris, Boyd L., San Diego, Calif.
(Member Jackson County Medical Society)
Harris, Charles W., St. Louis
Harris, Hinman A., University City
Harris, Solon P., St. Louis
Harrison, Lee B., St. Louis
Harrison, Stanley L., St. Louis
Hart, L. Wayne, Kansas City
Hart, Martin M., Salem
Harting, Hugh R., St. Louis
Hartman, Paul T., St. Louis
Hartmann, Alexis F., St. Louis
Hartnett, Leo J., Clayton
Hartstein, Jack, University City
Hartwig, Frederick H., Kansas City
Hartwig, John A., St. Louis
Hartwig, Raymond W., Kansas City
Harvey, Harold D., Springfield
Harwell, J. Lester, St. Louis
Hasek, James A., Cabool
Hasenmueller, James J., St. Louis
Hash, Emalyn H., Kansas City
Hashinger, Edward H., La Jolla, Calif.
(Member Jackson County Medical Society)
Hasselblad, Oliver W., New York
(Member North Central Counties Medical Society)
Hasson, Jack, St. Louis
Hasson, Robert, Moberly
Hata, Daikichi, Boonville
Hatfalvi, Bela I., St. Louis
Haun, Cosmo L., Columbia
Hauptmann, William L., St. Louis
Hausheer, Herman J., Independence
Haw, Marvin T. Jr., Bonne Terre
Hawk, Bray O., St. Louis
Hawker, William D., St. Louis
Hawkins, George L. Jr., St. Louis
Hawkins, Lee W., Chesterfield
Hayden, Loyola F., St. Louis
Hayek, Wesley E., St. Louis
Hayes, Lawrence L., Kansas City
Hayes, Paul W., St. Joseph
Haynes, James W., St. Louis
Haynes, Pugh Jr., St. Louis
Haynes, Robert C., Marshall
Haynes, Solon E., Kansas City
Haynie, William W., Kansas City
Hazen, Robert M., Kansas City
H'Doubler, Charles E., Springfield
H'Doubler, Francis T. Jr., Springfield
H'Doubler, Peter B., Springfield
Headrick, John A., St. Louis
Hecker, Joesph E., Jackson
Hedges, Richard C., Excelsior Springs
Heeb, Max A., Sikeston
Heideman, Alvah G., St. Louis
Heideman, Milo L., St. Louis
Heidenreich, Harry L., St. Louis
Heifetz, Carl J., St. Louis
Hein, Paul A. Jr., St. Louis
Heinbecker, Peter, St. Louis
Helbing, Edward J., St. Louis
Heller, B. Marcus, Kansas City
Hellerstein, Stanley, Kansas City
Hellweg, Charles E., Mount Vernon
Hellweg, Raymond W., St. Louis
Helm, James O., New Florence
Helman, Richard G., Kansas City
Hemenway, William G., Columbia
Henderlite, John W., St. Louis
Hendin, Aaron, Olivette
Hendren, Glenn W., Liberty
Hengen, Henry E., Bridgeton
Henke, Charles F. St. Louis
Hennelly, John J., St. Louis
Henrickson, H. O., Poplar Bluff
Henry, Clarke L., Kansas City
Henry, Schubert D., Kansas City
Henschel, Eugene V., St. Louis
Hensley, Daniel R., Lilbourn
Herbert, Charles T., Cape Girardeau
Herman, Allen I., St. Joseph
Herman, Morris, St. Louis
Hernandez, Salvadore, St. Louis
Herrick, Harold C., La Grange
Herrman, George V., Kansas City
Hershey, Falls B., University City
Hertel, Ronald C., St. Louis
Hetlage, Louis P., Troy
Heusler, Anton F., St. Louis
Heutel, Lee B., Union
Heyer, Oscar C., St. Louis
Hibbard, Blaine Z., Kansas City
Hickerson, William H., Independence
Hickey, James L., St. Louis
Hickey, Robert F., St. Louis
Hicks, Robert S., St. Louis
Higgins, John W., St. Louis
Higgins, Robert S., Kansas City
Hilbert, Paul H., St. Louis
Hildreth, H. Rommel, St. Louis
Hill, Jack H., Kansas City
Hill, James E., Fulton
Hill, Jesse N., Independence
Hilton, Paul E., Kirksville
Hink, Frederick W., Independence
Hirsch, Albert, Vandalia
Hirsch, Joe E., Kansas City
Hoadley, William D., Kansas City
Hoard, Joseph W., Webster Groves
Hobart, Carl A., St. Louis
Hobbs, Alonzo G., St. Louis
Hobbs, Earl B., Smithville
Hobbs, John E., St. Louis
Hoctor, Emmett F., Farmington
Hodge, Robert H., N. Kansas City
Hodges, Fred J. III, St. Louis
Hodgson, Frank H., Kansas City
Hoelscher, Harold F., Warrenton
Hoenig, Hector F. Jr., Bethany
Hoeper, Samuel D., Grandview
Hoffman, Jacob S., Kansas City
Hoffmann, Augustin D., St. Louis
Hoffmann, R. Lee, Kansas City
Hoffmann, Ronald E., St. Louis
Hofsommer, Armin C., Webster Groves
Hofstatter, Leopold, St. Louis
Hofstatter, Lilli, St. Louis
Hogan, Daniel F., Port Isabel, Tex.
(Member Jackson County Medical Society)
Hogan, John R., St. Louis
Hogan, Patrick C., St. Louis
Hogancamp, Charles E., St. Louis
Hogancamp, Glenn E., Ballwin
Hogeboom, George W., Delray Beach, Fla.
(Member Greene County Medical Society)
Hogue, Frank S., Kansas City
Holbrook, Charles K., St. Louis
Holcomb, John K., Cape Girardeau
Holemon, R. Eugene, St. Louis
Holley, Donald B., Camdenton
(Member Mid-Missouri County Medical Society)
Hollingsworth, Ray S., Clinton
Hollis, Richard W., Springfield
Hollo, Vencel W., St. Louis
Hollweg, Kenneth C., Kansas City
Holmes, Daniel E., Springfield
Holmes, David R., Springfield
Holscher, Edward C., St. Louis
Holt, Earl P. Jr., St. Louis
Holt, Waldo S., Kansas City
Holton, Edward B., Independence
Holtz, Alan S., St. Louis
Holtz, Sumner, St. Louis
Holtzman, Samuel, Joplin
Homan, Joseph S., St. Louis
Hook, Waller G., Kansas City
Hoover, Bernard L., St. Louis
Hoover, H. Lee Jr., Springfield
Hope, James L., Lebanon
Hopkins, Florian G., Gideon
Hopkins, Thomas J., Sedalia
Hopkins, T. Spencer, Sedalia
Hornback, Edward R., Joplin
Horner, Glennon A., Marceline
Horner, John L., St. Louis
Hornstra, Robijn K., Kansas City
Horst, Otto C., Springfield
Horton, James D., Springfield
Horwitz, Irwin B., St. Louis
Hosto, Leland E., St. Louis
Houck, Russell M., Kecoughtan, Va.
(Member Clay County Medical Society)
Houston, Vincent T., St. Louis
Howden, Thomas L., St. Joseph
Howe, Albert L., St. Louis
Howe, Louis F., St. Louis
Howell, B. D., Brookfield
Hoxworth, Gerald M., Cape Girardeau
Huber, Erwin T., St. Louis
Huber, Lasley E., Moberly
Huck, Frank F., Fenton
Huck, Richard F., St. Louis
Huckstep, Robert A., Farmington
Hudgens, Richard W., St. Louis
Huggins, Albert M., St. Louis
Hughes, Gerald E., Kansas City
Hughes, Judson M., Fulton
(Member Buchanan County Medical Society)
Hughes, Robert G., St. Louis
Hughes, Shelby B., Clinton
Hulbert, Bernard, St. Louis
Hulstra, Johannes F. W., Springfield
Hummel, Anton J., St. Louis
Hummel, William C., St. Louis
Humphrey, George E., St. Louis
Humphrey, James, Mound City
Humphreys, Edward T., Boonville
Hungate, Carroll P., Kansas City
Hunleth, Frank E., St. Louis
Hunt, Claude J., Kansas City
Hunt, John W. Jr., Leadwood
Hunt, Lloyd H., Salem
Hunt, Thomas R., Kansas City
Hunt, William J., St. Joseph
Hunter, James R., Webster Groves
Hunter, Martin P., Kansas City
Hunzicker, Warren J., Kansas City
Hurst, Ben B., Lebanon
Hurst, Wilfred W., Joplin
Hurwitt, Frank, Kansas City
Hustead, Robert F., Leawood, Kan.
(Member Jackson County Medical Society)
Husted, George W., Parma
Hutchinson, James H. Jr., St. Louis
Hutto, A. Herman, St. Louis
Hyde, Lawrence L., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Hyman, Anna, St. Louis
Hyndman, Charles E., St. Louis

I

Ide, Lucien W., St. Joseph
Imes, Elvin D., Maryville
Ingham, Walton C., Kansas City
Inkley, John J., St. Louis
Irick, Carl C., Naples, Fla. (Member St. Louis County Medical Society)
Irvin, William M., St. Louis
Irwig, Fred, Kansas City
Isbell, Charles H., Carthage
Isom, Waldo B., Knox City
Israel, Milton R., St. Louis
Ittner, George W. Jr., St. Louis
Ivy, Henry B., Springfield
Izmirlian, Grant, St. Louis

J

Jabczenski, Felix F., Ft. Huachuca, Ariz. (Member St. Louis Medical Society)
Jackson, Edward K., Clarksville
Jackson, Haywood R., Kansas City
Jackson, Robert L., Columbia
Jackson, Vernon B., Fulton
Jackson, William R., Kansas City
Jackson, William R., Maryville
Jacob, Walter P., Kansas City
Jacobs, Charles C., St. Louis
Jacobs, David S., Kansas City
Jacobs, Frederick A., St. Louis
Jacobs, Morton, Kansas City
Jacobs, Walter H., Kansas City
Jacobsohn, Warren Z., St. Louis
Jaeger, Joseph N., Jackson
Jaime, Nicholas, Kansas City
James, Norman A., St. Louis
James, Otis E. Jr., Kansas City
Jameson, James E., Springfield
Janney, James G. Jr., Clayton
Jansen, Robert, Kansas City
Jarvis, James A., Kansas City
Jaudon, Joseph C., Clayton
Javaux, Everett J., St. Louis
Jean, J. Ted, St. Louis
Jeans, Virgil, Joplin
Jeffries, Robert C., Kansas City
Jenab, Morteza, Kansas City
Jenkins, Paul A., Lebanon
Jennett, James H., Kansas City
Jensen, Joshua E., St. Louis
Jick, Sidney, St. Louis
Joffe, Irwin, Paragould, Ark. (Member Dunklin County Medical Society)
Johnson, Alan G., St. Louis
Johnson, C. Laurence, Kansas City
Johnson, Charles R., San Francisco, Calif. (Member Marion-Ralls-Shelby County Medical Society)
Johnson, Charles S., Warrensburg
Johnson, David S., St. Louis
Johnson, Earl W., Cape Girardeau
Johnson, Frank C., Doniphan
Johnson, George A., Springfield
Johnson, George L., Ft. Benning, Ga. (Member Greene County Medical Society)
Johnson, Grover C., Marthasville
Johnson, James S., Kansas City
Johnson, Joseph E., Kansas City
Johnson, Lanny L., St. Louis
Johnson, Maurice N., St. Louis
Johnson, Mitchell D., Ferguson
Johnson, Morris B., Grandview
Johnson, Roy, Ferguson
Johnson, Richard E., Columbia
Johnson, Thomas M., Kansas City
Johnson, Warford B., Springfield
Johnson, William A., Kansas City
Johnson, William F., Springfield
Johnston, Joseph L., Springfield
Johnstone, John Jr., Kirkwood
Johnstone, Paul N., Kansas City
Jolly, Benjamin N., Mexico
Jolly, William H., Mexico
Jonas, Harry S. Jr., Independence
Jones, Andrew B., St. Louis
Jones, Augustin, St. Louis
Jones, Dorothy J., St. Louis
Jones, Edna M., Clinton
Jones, Edward S., Harrisonville
Jones, George H., Kansas City
Jones, Grey, St. Louis
Jones, James B., St. Louis
Jones, James H., St. Louis
Jones, John B., Kirksville
Jones, Keith D., Warrensburg
Jones, Otey S., St. Louis
Jones, Richard A., St. Louis
Jones, Theodore R., Kansas City
Jones, Victor, Brentwood
Jones, Vincent L., St. Louis
Jordan, Edward J., St. Louis
Jordan, Walter R., St. Louis
Jorel, Louis E., Springfield
Jorstad, Louis H., St. Louis
Joseph, Harold J., Ladue
Joslyn, Harold L., St. Louis
Jost, Charles A., St. Louis
Jotte, Richard F., St. Ann
Juden, Alexander G., Cape Girardeau
Judge, Walter T., Crystal City
Judy, Joseph D., Ferguson
Jung, J. Marshall, Illmo
Justus, John B., Kansas City

K

Kahn, Lawrence, St. Louis
Kaiser, George C., St. Louis
Kallenbach, Glen P., Mexico
Kamada, Tsutomu, St. Charles
Kamakas, Nicholas, St. Louis
Kaminsky, Watson W., Fort Ord, Calif. (Member St. Louis Medical Society)
Kamm, William A., St. Louis
Kanagowa, Hajime H., Jefferson City
Kanarek, Joseph, Kansas City
Kane, Clyde E., St. Louis
Kantor, Julius M., Kansas City
Kantor, Samuel, Kansas City
Kaplan, Albert, St. Louis
Kappesser, Netajean B., St. Louis
Kappesser, Roland C., St. Louis
Karandjeff, Apostle D., St. Louis
Kardesch, Milton, St. Louis
Karl, Michael M., St. Louis
Karraker, Alvan G., Farmington
Karsh, Robert S., St. Louis
Kartus, Irving, Kansas City
Kaskie, Clifford R., Clayton
Kasten, Melvin C., Cape Girardeau
Katz, Milton, Kansas City
Kauffman, Ruth, Versailles
Kaufmann, Herbert H., Kansas City
Kaul, Philip G., Kansas City
Kayes, Jack, St. Louis
Keairnes, Harold W., Independence
Kealhofer, George C., Kansas City
Keats, Theodore E., Charlottesville, Va. (Member Boone County Medical Society)
Keeble, Charles B., St. Louis
Keeler, James E., Kansas City
Keenoy, John J., St. Louis
Keffler, Karl L., St. Louis
Kehoe, John J., St. Louis
Keim, John H., Cape Girardeau
Keller, Joseph M., St. Louis
Keller, Louis, St. Louis
Keller, Maurice J., St. Louis
Keller, Robert M., Wentzville
Kellett, John G., Webster Groves
Kelley, Gilbert B., Savannah
Kelley, Ralph R., Savannah
Kelley, Robert W., St. Louis
Kelling, Douglas G., Waverly
Kelling, Jordan, Waverly
Kelly, Eugene H., Ironton
Kelly, Marshall W., Jefferson City
Kelly, R. Emmet, St. Louis
Kelsey, Kenneth L., Aurora
Keltner, Raymond O., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Keltner, Raymond M. Jr., St. Louis
Kendall, Charles A., Independence
Kendig, John H., St. Louis
Kendis, Joseph B., St. Louis
Kennard, George K., Kansas City
Kenney, Roy E., Neosho
Kent, Bela K., Kansas City
Kent, Clifford F., Kansas City
Keown, Kenneth K., Columbia
Kepler, Earl C., Fulton
Kerr, David N., St. Louis
Kerr, Frank T., Monett
Kessler, Joseph J., St. Louis
Kessler, Sheldon, Florissant
Ketcham, William M., Kansas City
Ketterman, Grace H., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Ketterman, Herbert L., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Kettner, Edward G., Kansas City
Key, James S., Springfield
Keyes, Edward L., St. Louis
Kibbe, Edgar A., California
Kieber, Robert W., St. Joseph
Kieffer, Roland S., St. Louis
Kieffer, Victor B. Jr., St. Louis
Kiehl, Katharine, Joplin
Kienberger, Paul A., Independence
Kiene, Richard H., Kansas City
Kienzle, Edward C., St. Louis
Kilker, Clarence H., St. Louis
Kilker, Donald E., St. Louis
Kilo, Charles, St. Louis
Kimball, I. W., Parkville
Kimball, Merritt H., Kansas City
Kimberlin, Herbert C., Trenton
Kimelman, Nathan, St. Louis
Kimes, Ira D., Cameron
Kinder, James A., Cape Girardeau
King, Elbert R., Boise, Idaho (Member West Central Counties Medical Society)
King, Eustace E. III, St. Louis
King, Francis C., Kirkwood
King, J. Tenbrook, Kansas City
King, James P., St. Louis
King, John V., Webster Groves
King, Lucy J., St. Louis
King, Morris K., St. Louis
King, Phillip E., Liberty
King, Richard H., Clinton
King, Walter R., Kansas City
Kingsbury, Helen, Shawnee Mission, Kan. (Member Jackson County Medical Society)
Kingsland, Robert C., Clayton
Kinsella, Edward D., St. Louis
Kinsella, Peter W., St. Louis
Kinsella, Ralph A., St. Louis
Kinsella, Ralph A. Jr., St. Louis
Kipnis, David M., St. Louis
Kirschman, Robert E., Joplin
Kirstein, Melvin B., St. Louis
Kirtz, Louis P., Clayton
Kiser, David M., Kansas City
Kissane, John M., St. Louis
Kister, George E., St. Charles
Kistner, William F., St. Louis
Kitchen, William M., Kansas City
Klaff, Daniel D., St. Louis
Klebba, Larry B., Jefferson City
Klein, Andrew G., St. Louis
Klein, Arnold G., St. Louis
Klein, Bert H., St. Louis
Klein, Edward H., Kansas City
Klein, Saul J., St. Louis
Kleinschmidt, Clinton, St. Louis
Klenk, Charles L., St. Louis
Klepinger, Dayton P., Neosho
Kline, Carlyn M., St. Joseph
Kline, Edmund W., St. Joseph
Klinge, Frederick W., St. Louis
Klingner, George M., Springfield
Klippel, Allen P., Clayton
Klippel, Bernhardt W., St. Louis
Kloecker, Herman J., St. Louis
Kloecker, Richard J., St. Louis
Kloecker, Robert P., St. Louis
Klym, Nicholas, St. Louis ,
Knabb, Arthur D., Springfield
Knabb, Harris, Springfield
Knabb, Henry F. Jr., Springfield
Knabb, Kenneth E., Springfield
Kneal, E. Ellsworth, St. Louis
Kneibert, Fred L., Poplar Bluff
Knepper, Paul A., St. Joseph
Knese, Luke A., St. Louis
Knight, Franklin P., St. Louis
Knight, John S., Kansas City
Knight, Lyle B., Lee's Summit
Knight, William A. Jr., St. Louis
Knipschild, B. F., Marshall
Knoch, H. Kermit, Kansas City
Knock, Henry L., Kirkwood
Knoke, Frederick W. Jr., St. Joseph
Knowlton, Norman P. Jr., St. Louis
Knox, Earl R., Kansas City
Koch, Robert E., Clayton
Koehler, Charles A., Kansas City
Koehler, George A., St. Louis
Koehler, John W., Joplin
Koenig, Marvin I., St. Louis
Koerner, Kenneth A., Clayton
Koessel, Arthur W., St. Louis
Kohler, Eugene J., St. Louis
Kohler, Louis H., St. Louis
Kolze, Vernon W., Springfield
Komanetsky, William M., St. Louis
Konikov, Nadya, St. Louis

Konzelmann, John A., St. Louis
Koon, Ben H., Bolivar
Kopp, Jules H., St. Louis
Kopp, Leonard J., St. Louis
Koppenbrink, Walter E. Jr., Higginsville
Korn, Robert L., Clayton
Korth, William M., Kansas City
Kotner, Lawrence M., St. Louis
Koutsoumpas, William V., St. Louis
Kovac, Albert P., Kansas City
Kowert, Edward H., St. Louis
Kozal, Francis L., Crystal City
Kozlowski, Albert E., St. Louis
Kraft, Edward O., Brentwood
Kraft, Jacob, Kansas City
Kramer, Fred, St. Louis
Kramolowsky, Helmuth H., St. Louis
Kraner, Justin F., St. Louis
Kranson, Seymour J., Independence
Kratz, Frederick W., Liberty
Kratz, Paul E., Cape Girardeau
Krause, G. Lynn Jr., St. Louis
Krause, Richard M., St. Louis
Krebs, Joseph M., Clayton
Krieger, John L., St. Louis
Krojanker, Rolf, St. Louis
Kromer, Charles, St. Louis
Kubin, Milford T., Columbia
Kubitschek, Paul F., St. Louis
Kuebrich, Thomas C., Ferguson
Kuenzi, Donald E., Kansas City
Kuhlman, Robert E., St. Louis
Kuhn, John R. Jr., Joplin
Kuhn, William F. II, Kansas City
Kulowski, Jacob, St. Joseph
Kurth, Robert K., St. Louis
Kurz, Rudolph F., St. Louis
Kutryb, Walter J., St. Louis
Kuttner, Marianne, St. Louis
Kyger, Fred B., Kansas City
Kyger, John E., Kansas City
Kyner, Thos. A., Kansas City

L

Lachance, Leopold, Centralia
Ladd, Charles B., St. Louis
Ladenson, Roland P., Columbia
LaDriere, Raymond J., St. Louis
Laffoon, France L., Vista, Calif.
(Member Jackson County Medical Society)
Laffoon, Robert G., Illmo
LaHue, Lilburn D., Butler
LaHue, William C., Lexington
Lally, James J., Kansas City
Lam, Robert L., St. Louis
Lamar, Robert F., Kansas City
Lamb, Wanda, St. Louis
Lambert, Marian, Kansas City
Lambie, Rodger W., Kansas City
Lamy, John E., Sedalia
Landau, Daniel B., Hannibal
Landau, William M., St. Louis
Landis, George K., Kansas City
Landor, John H., Columbia, Mo.
Lane, Clinton W., St. Louis
Lane, Daniel K., St. Louis
Laney, Roland L., Carlsbad, Calif.
(Member Jasper County Medical Society)
Lang, John J., St. Louis
Langan, William J. Jr., St. Louis
Lange, Adolph C., St. Louis
Langeluttig, Harry V., Mount Vernon
Langhus, Melvin O., N. Kansas City
Langston, Walter R., Springfield
Lanier, Earl W., St. Louis
Lankford, Harold D., Mexico
Lanning, Richard C., Ste. Genevieve
Lanning, Robert J., Hannibal
Lansche, Elmer A., St. Louis
Lansche, W. Edward, St. Louis
Lapi, Angelo, Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Lapp, Harry C., Kansas City
Larimore, Joseph W., St. Louis
Larkin, Rosemary R., St. Louis
Larsen, Kenneth V., St. Louis
Larson, Paul U., St. Louis
Lassar, Gilbert N., St. Louis
Latham, Kenyon S., California
Latham, Raymond W., Kansas City
Latimer, Walter N. A., Hannibal
Lattinville, Henry E., St. Louis
Lauber, Joseph J., Creve Coeur
Lauer, Daniel J., Kansas City
Lauer, John D., St. Louis
Laurenzana, Frank P., Kansas City
Lauritzen, Richard E., St. Louis
Lawless, Charles L., Marshall
Lawrence, George H., St. Louis
Lawrence, John R., Marshall
Lawton, John T., St. Louis
Lawton, Lawrence M., St. Louis
Lawton, Thomas P., St. Louis
Layton, Ira C., Kansas City
Leahy, John G., St. Louis
LeBlanc, Leo J., St. Louis
L'Ecuyer, Jerome L., St. Louis
Lederer, Charles M., Warrensburg
Lederman, Joseph, St. Louis
Lee, Carleton H., St. Joseph
Lee, George C., Kansas City
Lee, Gerald B., Columbia
(Member St. Louis Medical Society)
Lee, Henry A., Kansas City
Leech, Charles A., Columbia
Leech, Maurice P., Fayette
Legner, Stanley G., Perryville
Lehner, Richard L., Kansas City
Leider, Robert J., St. Louis
Leidinger, Karl J., Republic
Leifer, William W., Kansas City
Leightner, William, St. Louis
Leitch, Cecil G., Blue Springs
Leitch, David A., Kansas City
Leitz, Frank B., Kansas City
Lembeck, Joseph A., St. Louis
Lemmon, George B., Springfield
Lemmon, G. Bruce Jr., Springfield
Lenobel, Milton I., Clayton
Lentz, Clark H., Kansas City
Lentz, Harold C., Kansas City
Leo, William A., Kansas City
Leonhardt, Erwin M., St. Louis
Lerman, George S., St. Louis
Lerwick, Everett R., St. Louis
Leslie, Charles H., Kirkwood
Leslie, James F., Springfield
Leslie, J. Paul, Jefferson City
Leslie, James T., Louisville, Ky.
(Member Cole County Medical Society)
Leslie, James T. Jr., Jefferson City
Levey, Harry B., Kansas City
Levey, Simon A., Overland
Levin, Marvin E., St. Louis
Levin, Sidney S., St. Louis
Levitt, Joseph, St. Louis
Levy, Irwin, St. Louis
Levy, Jerome F., St. Louis
Lewellen, Charles H., Louisiana
Lewin, Wilbur H., St. Louis
Lewis, Albert G., Platte City
Lewis, James E. Jr., St. Louis
Lewis, Noel R., Springfield
Lewis, Ray B., Columbia
Lewis, Revis C., Kansas City
Leydig, Stanley M., St. Louis
Liang, Howard S., St. Louis
Lichtor, Alexander, Kansas City
Lichtor, Joseph M., Kansas City
Lichty, Charles A., Shelbina
Lieb, Francis X., St. Louis
Lieb, Otto, St. Louis
Lieberman, B. Albert Jr., Kansas City
Lieberman, David M., St. Louis
Liebmann, Fritz M., St. Louis
Liese, Grover B., St. Louis
Lilly, Terry E., Kansas City
Lilly, Terry E. Jr., Kansas City
Limbaugh, Walter R., Hayti
Lindeman, Carl H., St. Louis
Lindquist, Carl N., Kansas City
Link, Alexander J., St. Louis
Link, Vance E., Independence
Linsenmeyer, Charles M., St. Louis
Linville, Howard E., Kansas City
Lipschitz, Ervin, St. Louis
Lipsitz, Ellis S., St. Louis
Lischer, Carl E., St. Louis
Lissner, Arthur B., St. Louis
Liston, Odus, Oakgrove
Little, Monroe H., St. Louis
Littmann, Lewis E., St. Louis
Litton, Lyle D., Springfield
Litwiller, R. W., Columbia
Litzow, Louis T., St. Louis
Lloyd, Ivan E., Independence
Lockhart, Charles E., Springfield
Lodwick, Gwilym S., Columbia
Loeb, Virgil Jr., St. Louis
Loeffel, Ellen S., St. Louis
Logan, James A., Warsaw
Logue, John T., Columbia
Lohr, Curtis H., St. Louis
Lohr, Robert W., Ferguson
Lohrentz, Lois H., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Loitman, Bernard, St. Louis
Londe, Sol, St. Louis
London, Stanley L., St. Louis
Lonergan, Warren M., St. Louis
Long, David S., Harrisonville
Long, Forrest C., Savannah
Long, Frank B., St. Louis
Long, Frank B., Sedalia
Long, R. Stacy, Kansas City
Longenecker, Joe L., Joplin
Lonsway, Maurice J., St. Louis
Lonsway, Maurice J. Jr., St. Louis
LoPiccolo, Vincent J., St. Louis
Lord, Richard E., St. Louis
Lorenc, Ernest, Springfield
Lottes, James O., St. Louis
Loughead, John R., Poplar Bluff
Love, Drury, Jefferson City
(Member Clay County Medical Society)
Love, Walter S., Nevada
Loving, B. Rush, Tucson, Ariz.
(Member St. Louis County Medical Society)
Lovinggood, Thomas A., Cape Girardeau
Lowe, Alvin L., Sedalia
Lowe, Horace A. Jr., Springfield
Lowell, Paul, Kansas City
Lowenstein, Paul S., St. Louis
Lowney, John F., Columbia
Lowrey, Ford J., Kansas City
Loyd, Earl L., Jefferson City
Lucas, Fred V., Columbia
Lucido, Joseph L., St. Louis
Lucke, Eugene M., Hannibal
Luckenbill, Paul T., Plattsburg
Luedde, Fullerton W., St. Louis
Luedde, Philip S., St. Louis
Luehrs, Robert O., St. Louis
Lugo, Samuel, St. Louis
Luh, Andrew, St. Louis
Luke, Herbert K., St. Louis
Lund, Herluf G., St. Louis
Lund, Robert H., Clayton
Lundgren, Fred H. Jr., Kansas City
Lurie, Harold H., Springfield
Lusk, Charles A. Jr., Butler
Luten, Drew W., St. Louis
Luter, Carter W., Butler
Lutkewitte, Joseph F., Ste. Genevieve
Lutz, Martin H., St. Louis
Lyddon, Harold R. Jr., Kansas City
Lyle, Robert R., Versailles
Lyman, Edward H., St. Louis
Lynxwiler, Chester P., St. Louis
Lyss, Carl, St. Louis
Lytle, William R., Rolla
Lyttle, Garnet C., St. Louis
Lytton, George J., Kansas City
Lytton, William B., St. Louis

Mc

McAdam, Charles R., St. Louis
McAfee, C. Alan, St. Louis
McAlhany, Howard J., Springfield
McAlister, William H., St. Louis
McArtor, Thomas R., Browning
McBurney, Alexander A., Hanover, N. H.
(Member Saline County Medical Society)
McBurney, Charles A., Slater
McCall, Edwin L., St. Louis
McCalla, John P., Kansas City
McCallum, Andrew J. C., Aurora
McCann, John F., St. Louis
McCann, Louis P., Nevada
McCanse, Andrew, Kansas City
McCarroll, Henry R., St. Louis
McCarthy, John M., St. Louis
McCarthy, Thomas D., Ferguson
McCarthy, William F., Blue Springs
McCaughan, John M., St. Louis
McClanahan, Robert C., Kansas City
McCloskey, R. Bruce, Webster Groves
McClure, David N., Clayton
McClure, Thomas C., Fort Lauderdale, Fla.
(Member SEMO County Medical Society)
McCool, James F. Jr., St. Louis
McCool, Stanley G., St. Louis
McConchie, James E., Independence
McCorkle, E. Lee, Marshall
McCormick, James E., Kansas City
McCoy, Frederick J., Kansas City
McCoy, Warren R., Caruthersville
McCracken, Samuel R., Excelsior Springs
McCraw, Doyle C., Bolivar
McCubbin, Clarence R., Kansas City
McCullough, Campbell C., Kansas City
McCuniff, William B., Kansas City

McDaniel, John R., St. Joseph
McDermott, Alfred E., Perryville
McDonald, Bruce P., Kansas City
McDonald, Eugene F., Jackson
McDonald, George H., St. Louis
McDonald, Victor G. Jr., Kansas City
McDonald, Wilbur P., St. Joseph
McDonnell, John F., Kansas City
McDonough, John, St. Louis
McDowell, Frank, St. Louis
McElroy, Glenn L., Columbia
McElvain, Robert C., Boca Raton, Fla.
(Member St. Louis Medical Society)
McFadden, Gene A., Waverly
McFadden, James F., St. Louis
McFadden, James F. Jr., St. Louis
McFarland, H. Richard, Kansas City
McFarland, Morris D., Kansas City
McGannon, Paul T., Kansas City
McGinnis, Byron J., St. Louis
McGinnis, William F., St. Louis
McGinty, Charles P., Cape Girardeau
McGregor, Ronald K., St. Louis
McGuire, Thomas H., Kansas City
McHaney, John W., Jefferson City
McIntire, Emery J., Carthage
McIntyre, John D., Kansas City
McKaskle, Clarence W., Caruthersville
McKee, Joseph W., Kansas City
McKee, Oliver A., Kirkwood
McKee, Wallace P., Kansas City
McKenna, David H., Wilmot, S. D.
(Member St. Louis Medical Society)
McKinstry, Karl V., DeSoto
McKnelly, William V., Jefferson City
McKnelly, William V. Jr., Kansas City
McLain, Bobby M., Poplar Bluff
McLean, Royal C., St. Louis
McLelland, Richard I., Seattle, Wash.
(Member St. Louis Medical Society)
McLeod, John, Kansas City
McMahon, Alphonse, St. Louis
McMahon, Bernard J., Clayton
McManamon, Thomas V., Hazelwood
McMillan, Thomas E., Kansas City
McMurray, Herbert C., Manchester
McNalley, Frank P., Clayton
McNalley, Michael, St. Louis
McNamara, John J., Richmond Heights
McNeel, Lee A., Jr., Greenfield
McNew, William T., Carthage
McNutt, Theodore L., Kansas City
McPhee, William R., Kansas City
McPheeters, James W., Poplar Bluff
McPike, Lloyd H., Joplin
McSwiney, John G., St. Louis
McVay, James R., Kansas City
McVay, James R. Jr., Kansas City

M

Mabrey, John P., Plattsburg
Macauley, Bernard J., Poplar Bluff
MacBryde, Cyril M., St. Louis
MacDonald, Robert R. Jr., St. Louis
Macdonald, William C., St. Louis
Macdonnell, Carey R., Marshfield
Macdonnell, Thomas M., Marshfield
Machek, Otakar, St. Louis
MacInnis, Florence E., Kansas City
Mack, Mary L., Joplin
Mackenzie, James W., Columbia
Maclean, J. Alexander, Baldwin City, Kan.
(Member Jackson County Medical Society)
MacNaughton, Ralph E., Kansas City
MacNaughton, Robert A., Leawood, Kan.
(Member Jackson County Medical Society)
Macnish, James M., St. Louis
Macon, William L. Jr., St. Louis
Maddox, Albert R., Sedalia
Maddox, John D., Joplin
Maddux, William P., Springfield
Madison, Waite H., Kansas City
(Member Saline County Medical Society)
Magaletta, George E., Cape Girardeau
Magee, Charles D., St. Louis
Magee, Robert L., El Dorado Springs
Magee, William E., St. Louis
Magidson, Joseph, St. Louis
Magill, Joseph S., Milan
Maginn, Richard L., St. Joseph
Magness, Guy N., St. Louis
Magness, William C., Branson
Mahe, George A., St. Louis
Maher, Robert W., Springfield
Maher, Thomas F., St. Louis
Mairs, Edgar J., Trenton
Maizus, Saul H., St. Louis
Malles, A. Conrad, St. Louis
Mandler, George, Chillicothe
Manganaro, Frank J., St. Louis
Mangels, Kenneth A., Independence
Mangelsdorf, Thomas K., St. Louis
Manion, Peter J., St. Louis
Mann, James K., Hannibal
Mannis, Ben G., St. Louis
Mansur, Edward E., Stuart, Fla.
(Member Cole County Medical Society)
Mantell, Harriet B., Kansas City
Maple, Francis M., Springfield
Marcus, Morris D., St. Louis
Margolis, Richard M., Florissant
Marienfeld, Carl J., Columbia
Markel, Arthur D., Poplar Bluff
Marks, Mark M., Kansas City
Marmor, William A., St. Louis
Mars, Hartley F., Forsyth
Marsh, Alice, Pleasant Hill
(Member Jackson County Medical Society)
Marsh, Wallace S., Seattle, Wash.
(Member Clay County Medical Society)
Marshall, Alfred H., Charleston
Marshall, Cameron F., Kansas City
Marshall, William G., Glasgow
Marston, F. James Jr., St. Joseph
Marston, Warren G., St. Louis
Martel, Dominique, St. Louis
Martin, Andrew D., Sikeston
Martin, Daniel J., St. Louis
Martin, Forrest L., Nevada
Martin, Frederick W. Jr., St. Louis
Martin, J. Barlow, St. Louis
Martin, James M., Kirkwood
Martin, John N., St. Joseph
Martin, Maynard W., Houston, Tex.
(Member St. Louis Medical Society)
Martin, Wilfred E., Odessa
Martin, W. Joe, Louisiana
Marty, Loraine A., Pierce City
Martt, Jack M., Columbia
Martz, John C., Webster Groves
Masor, Nathan A., Butler
Massie, Edward, St. Louis
Masters, William H., St. Louis
Masucci, Joseph M., Kansas City
Mathewson, Hugh S., Kansas City
Matovich, Violet B., Columbia
Matteson, Frank B., Grant City
Matthews, John G., St. Louis
Matthews, John I., Jefferson City
Mattis, Robert D., Clayton
Maughs, Sydney B., St. Louis
Max, Paul F., St. Louis
Maxey, Hugh W., Jefferson City
Maxson, T. Reed, Warrensburg
Maxwell, Richard W., St. Louis
May, Albert L. Jr., Poplar Bluff
May, Benjamin F., St. Louis
May, James W., Kansas City
Mayer, John H. Jr., Kansas City
Mayer, Robert A., St. Louis
Mayer, William D., Columbia
Mayfield, James L., Crystal City
Mays, Frank G., Washington
Maze, Lawrence E., St. Louis
Mead, Samuel T., Slater
Meador, James R., Clayton
Meador, Murray W., Smithville
Meagher, Arthur J., St. Louis
Medler, Francis J., St. Louis
Mehan, Donald J., St. Louis
Mehan, George T., St. Louis
Meier, Francis X., Jefferson City
Meinberg, William H., St. Louis
Meiners, Paul N., St. Louis
Meiners, Theodore M., St. Louis
Meinershagen, Charles W., Jefferson City
Melburn, Colleen M., St. Louis
Melgaard, S. Ross, Kansas City
Melia, Bernard J., Jr., Jefferson City
Melick, William F., St. Louis
Meluney, Solomon E., St. Joseph
Menchetti, Don E., Springfield
Mendelsohn, Robert S., St. Louis
Mendelson, David F., St. Louis
Mendonsa, Lawrence E., St. Louis
Menendez, Manuel F., St. Louis
Manne, Marvin G., Ironton
Merenda, Sam J., St. Louis
Meriwether, Don R., Kansas City
Merklin, Anton L., St. Louis
Merrims, Theodore, St. Louis
Merritt, Burch A., St. Louis
Merz, Jean J., St. Louis
Mestres, Hugh M., St. Louis
Metz, Charles O., St. Louis
Metzgar, Marshall T., Columbia
Meyer, Claude B., Nixa
Meyer, Curtis A., St. Louis
Meyer, Herman M., St. Louis
Meyer, James E., Manchester
Meyer, Oscar D., St. Louis
Meyer, Paul W., Kansas City
Meyerhardt, Milton H., St. Louis
Meyers, Harold L., Mission, Kan.
(Member Jackson County Medical Society)
Meyers, John B., St. Louis
Meyers, Montague M., St. Louis
Mezera, Raymond A., St. Louis
Michael, Kenneth D., St. Louis
Michael, Vernon E., St. Louis
Michaelis, Charles E., Fredericktown
Michaelree, John F., St. Louis
Middleman, Isadore C., St. Louis
Middleton, John W., Louisiana
Mier, Thomas M., St. Louis
Milder, Benjamin, St. Louis
Miles, George O., Kansas City
Miles, Paul W., St. Louis
Miller, Charles Jr., Kirkwood
Miller, Charles W., St. Louis
Miller, Clinton L., Lee's Summit
Miller, Clyde S., Waynesville
Miller, D. Herbert, Muskogee, Okla.
(Member Chariton-Macon-Monroe-Randolph County Medical Society)
Miller, David, St. Louis
Miller, David V., Poplar Bluff
Miller, Gerald L., Kansas City
Miller, Harold W., Willow Springs
Miller, Howard S., Macon
Miller, Leroy J., Columbia
Miller, Max I., Prairie Village, Kan.
(Member Jackson County Medical Society)
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Miller, Oliver J., Cape Girardeau
Miller, Wilson H., Kansas City
Millikin, Lester A., St. Louis
Milster, Clyde R., St. Louis
Miltenberger, Paul C., Kennett
Minnihan, Robert W., Affton
Minton, Robert S., St. Joseph
Mishkin, Marvin R., St. Louis
Miskovsky, Emil F., St. Louis
Missey, Wilburn C. Jr., St. Louis
Mitchell, Andrew D., Kansas City
Mitchell, Franklin L., Columbia
Mitchell, Robert H., Kansas City
Mitchell, Roy E., Salem
Mitra, Nirmal K., Mission, Kan.
(Member Jackson County Medical Society)
Mixson, William C., Kansas City
Modlin, John J., Columbia
Moe, William W., Kansas City
Moellenhoff, Robert W., Washington
Moen, Berwyn H., St. Joseph
Molden, Charles A., St. Louis
Monat, Seymour, St. Louis
Montani, Charles, St. Louis
Montello, Samuel A., Kansas City
Montes-de-Oca, Julio, St. Louis
Montgomery, Austin F., St. Louis
Montgomery, James G., Kansas City
Moody, Jackson C., Bedor Mysore State, India
(Member West Central Missouri Medical Society)
Mooney, Justin L., Kansas City
Mooney, Marcel L., Kansas City
Moore, Alva, St. Louis
Moore, Carl V., St. Louis
Moore, Dan B., St. Louis
Moore, Harry G., St. Louis
Moore, Harry G., Jr., St. Louis
Moore, Robert A., Kansas City
Moore, Walter L., St. Louis
Moore, William E., Normandy
Moranville, Benedict A., Columbia
Morehead, William E., Malden
Morest, F. Stanley, Hollywood, Fla.
(Member Jackson County Medical Society)
Morgan, David B., Kansas City
Morgan, Harry C., St. Louis
Morgan, Troy O. Jr., Albany
Morris, Harvey E., St. Louis
Morris, Joseph H. Jr., Independence
Morris, Mary E., St. Louis
Morris, William R., Kansas City
Morrison, Arlen, Clayton
Morrison, Donald H., Kansas City
Morrison, George B., Nevada
Morrison, T. A., Aurora
Morse, Marvin, St. Joseph

Mortensen, Frede, St. Louis
Morton, Paul C., Springfield
Moseley, F. Thomas, Springfield
Moses, Robert A., St. Louis
Moss, Paul, Kansas City
Mosser, Robert S., Independence
Mothershead, John L., St. Joseph
Motzel, Albert J., St. Louis
Mount, Allan, Kansas City
Mountjoy, Grace S., St. Louis
Mowrey, William O., Jennings
Moyer, Carl A., St. Louis
Muckerman, Richard I. C., St. Louis
Mueller, Clarence E., St. Louis
Mueller, John J., St. Louis
Mueller, Joseph A., St. Louis
Mueller, Martin J., Kansas City
Mueller, Morris A., St. Louis
Mueller, Robert, St. Louis
Mueller, Robert J., St. Louis
Mueller, Wilbur K., St. Louis
Muench, Albert H., St. Joseph
Muench, Ludwig O., Washington
Muenster, Vincent P., St. Charles
Muether, Raymond O., St. Louis
Mullarky, Wilbur A., St. Louis
Mullen, Jack, Bonne Terre
Mullen, Leo M., Kansas City
Mulligan, Leo V., St. Louis
Mullinax, Orr, Nevada
Mullins, Bernard L., N. Kansas City
Mullins, John E., St. Louis
Multhauf, Cyril J., Mission, Kan.
(Member Jackson County Medical Society)
Mundy, Homer F., St. Joseph
Mundy, William L., Kansas City
Munsch, Girard A., St. Louis
Murawsky, William V., St. Louis
Murphy, Bernard L., Hannibal
Murphy, George E., St. Louis
Murphy, James J., Kansas City
Murphy, James P., St. Louis
Murphy, John C., St. Louis
Murphy, Paul, St. Louis
Murphy, Robert J., Kansas City
Muschany, Norman K., St. Louis
Musgrave, David E., Excelsior Springs
Musick, James D., Springfield
Mutshnick, Clara P., St. Louis
Myers, James M., Rolla
Myers, John S., Kansas City
Myers, Robert M., Kansas City
Myers, Wilson A., Kansas City

N

Naime, Mansour J., Kansas City
Nakada, James R., St. Louis
Napper, Marvin L., Springfield
Naryka, Joseph J., St. Louis
Nash, Francis P., St. Louis
Nash, Helen E., St. Louis
Nash, W. Hampton, St. Louis
Nathan, Lester J., St. Louis
Neal, M. Pinson, Columbia
Needels, Orval T., Kansas City
Neilson, Arthur W., St. Louis
Nelson, Bentley A., Kansas City
Nelson, Fred L., St. Joseph
Nelson, J. Roger, Kirkwood
Nelson, James S., Brentwood
Nelson, Kenneth R., Oakland, Calif.
(Member of St. Louis Medical Society)
Nemec, Stanley S., St. Louis
Ness, Carl K., St. Joseph
Nesselrode, John H., Independence
Nester, Charles A., St. Louis
Netherton, George F., Cameron
Neu, Leo T. Jr., Springfield
Neubeiser, Ben L., St. Charles
Neun, William F., St. Louis
Newman, Mary J., Cassville
Newman, Percy, St. Louis
Newman, Robert L., Kansas City
Newport, Gerald, Creve Coeur
Newton, Gordon, St. Louis
Newton, William T., St. Louis
Nickel, James F., St. Louis
Nickson, Charles E. Jr., Independence
Nicolai, Charles H., St. Louis
Nicolay, Kenneth S., Kansas City
Nicolay, William R., St. Louis
Niedermeyer, Edward L., Tarkio
Niedermeyer, George J., St. Louis
Niesen, Frank J., St. Louis
Nigh, Charles A., St. Louis
Nigro, Dominic M., Kansas City
Nigro, E. Robert, Kansas City
Nigro, Joseph A., Kansas City
Nishi, James A., St. Louis
Nishi, Toshio, St. Louis
Nixon, Edward E., Gallatin
Noah, Joseph W., St. Louis
Nofles, James W., St. Louis
Nolan, Charles J., St. Louis
Noller, Henry W., Overland
Noltensmeyer, Milton N., Shawnee Mission, Kans.
(Member Jackson County Medical Society)
Nonkin, Paul M., Florissant
Norton, William H., St. Louis
Nouri, Hassan, St. Louis
Nuetzel, John A., St. Louis
Nunn, Pat M., Kansas City, Kan.
(Member Jackson County Medical Society)
Nunnelly, Gordon M., Cape Girardeau
Nussbaum, Paul B., Cape Girardeau
Nussbaum, Robert A., St. Louis
Nye, Robert S., St. Louis

O

Oakley, Margaret M., St. Louis
O'Bannon, Lon W. Jr., Florissant
Obermeyer, Charles G., St. Louis
O'Brien, Edward C., St. Louis
O'Brien, Harry F., Mexico
O'Brien, James A., Muskogee, Okla.
(Member Jasper County Medical Society)
O'Brien, Robert M., St. Louis
O'Connor, Robert J., Florissant
O'Connor, William B., St. Joseph
O'Dell, Timothy T., Oran
O'Donnell, Joseph V., St. Louis
O'Dowd, James A., St. Louis
Oehler, William F., Cape Girardeau
Oetter, Donald L., St. Louis
Ogilvie, John H., Gravois Mills
Oglesby, Richard B., St. Louis
Ogura, Joseph H., Ladue
O'Hearne, John J., Kansas City
Ohmoto, Masao, St. Louis
O'Keefe, Joseph D., St. Louis
O'Leary, James L., St. Louis
Olin, Robert H., St. Charles
Olive, George C., Neosho
Oliver, George A., Farmington
Olmsted, William H., St. Louis
O'Malley, Eugene J., St. Louis
O'Malley, James F., Kansas City
O'Neal, Lawrence W., St. Louis
O'Neal, Patricia, St. Louis
O'Neil, James H., Kansas City
O'Neill, John B., St. Louis
Ongjoco, Melchor I., St. Louis
Oppenheimer, Henry E., Clayton
O'Reilly, D. Elliott, St. Louis
Orenstein, Joseph M., St. Louis
Orgel, M. Norman, St. Louis
Ortmeyer, Leroy F., St. Louis
Osborn, Retus W. III, Farmington
Osborne, Charles D., Sedalia
Ossman, Julian A., Jefferson City
Ost, Mark D., Kansas City
Ostolaza, Martin F., St. Louis
O'Sullivan, Daniel F., St. Louis
O'Sullivan, George A., St. Louis
Ott, Harold J., St. Louis
Ott, Harold J., Maplewood
Ottensmeyer, Charles D., Overland
Otto, Thomas G., Cape Girardeau
Overend, D. S., Springfield
Overesch, Harry B., Kansas City
Overholser, Milton D., Columbia
Owen, James W. Jr., Bartlesville, Okla.
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Owen, Nicholas, New York, N. Y.
(Member St. Louis Medical Society)
Owen, Robert F., St. Louis
Owens, Graham J., Kansas City
Owens, Hugh H., Kansas City
Owens, Richard L., Kansas City
Owens, Robert H., Kansas City
Owings, Raymond H., Sedalia
Owre, Alfred Jr., Kansas City
Ozar, Milton B., Kansas City

P

Packman, Robert C., St. Louis
Paddock, Charles S., Joplin
Padfield, Earl G. Jr., Kansas City
Page, Jesse W., Sikeston
Paine, Robert, St. Louis
Painter, Andrew E., Portageville
Painter, Lattie B. Jr., Portageville
Pakula, Sidney, Kansas City
Palazzo, Frank A., St. Louis
Palcheff, Chris L., Springfield
Palenske, Robert L., Hornersville
Palermo, Vincent G., Bridgeton
Paletta, Francis X., St. Louis
Pallett, Harold A., Kansas City
Papp, Sandor D., Joplin
Parashak, Paul M., St. Louis
Parato, John M., St. Louis
Pareira, Morton D., St. Louis
Paris, William H., St. Louis
Park, George M., Chesterfield
Park, William I. Jr., Springfield
Parker, Arthur C. Jr., Poplar Bluff
Parker, Brent M., St. Louis
Parker, Elmer L., Kansas City
Parker, H. Graham, Platte City
Parker, Hubert M., Kansas City
Parker, Robert H., N. Kansas City
Parker, Thomas W., University City
Parker, William, St. Louis
Parelman, Allen G., Kansas City
Parsons, Bernie, Albany
Parsons, D. LeRoy, Cape Girardeau
Parsons, Eugene O., Kansas City
Parsons, Richard P., St. Louis
Pascoe, James J., Nevada
Passanante, Bartholomew M., St. Louis
Passman, Harold, Kansas City
Pate, Otho S., N. Kansas City
Patterson, Donald R., Joplin
Patterson, Grover S., Carthage
Patton, William G., Ironton
Pawol, S. E., St. Louis
Payne, John W., Columbia
Payne, Meredith J., St. Louis
Pearl, John F., St. Clair
Pearman, Carl C., Columbia
Pearse, Roy W. Jr., Nevada
Pearson, Paul E., Mission Kan.
(Member Jackson County Medical Society)
Peck, Chester R. Jr., Kennett
Peden, Burnet W., Clayton
Peden, Joseph C., St. Louis
Peden, James C. Jr., St. Louis
Peden, Joseph C. Jr., St. Louis
Peebles, J. B. Jr., Kirkwood
Peeler, James O., St. Louis
Peete, Don C., Kansas City
Pelz, Mort D., Miami, Fla.
(Member St. Louis Medical Society)
Pemberton, Charles W., Mendon
Pence, F. Wendell, Carthage
Penick, R. W., St. Louis
Penner, Stanley, Kansas City
Penney, David L., St. Louis
Penninger, William H., Springfield
Pennington, Francis E., St. Louis
Pennoyer, James, Webster Groves
Perll, Maurice F., Kansas City
Perll, Rita D., Kansas City
Pernoud, Flavius G. Jr., St. Louis
Pernoud, Michael F., St. Louis
Perry, David C., Mound City
Perry, H. Mitchell, St. Louis
Perry, John M., Princeton
Perry, Lawrence L. Jr., Kansas City
(Member Clay County Medical Society)
Perry, Ralph, Kansas City
Perry, William D., St. Louis
Peters, Evelyn L., Kansas City
Petersen, Arthur G., Kansas City
Petersen, Eugene G., Kansas City
Petersen, H. E., St. Joseph
Peterson, Carl M., Kansas City
Peterson, Donald B., Fulton
Peterson, Frederick D., St. Louis
Peterson, George L., Shawnee Mission, Kan.
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Peterson, Malcolm L., St. Louis
Peterson, Milton C., Kansas City
Peterson, Stanley S., Springfield
Peterson, Walter R., Kansas City
Petry, Ezra L., Kansas City
Pettit, Manson B., St. Joseph
Peugnet, Hubert B., St. Louis
Pfeffer, Robert I., St. Joseph
Pfeifer, Oliver C., St. Louis
Pfuetze, Edwin L., Kansas City
Phelps, William L., New York, N. Y.
(Member St. Louis Medical Society)
Phillips, Hanford, St. Louis
Phillips, John J., St. Louis
Phillis, Richard L., St. Louis
Piccione, Leonard M., St. Louis
Pickard, Clarence M., Columbia

Pickard, Nicholas S., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Pickens, E. Allen, Nevada
Pickens, Edgar E., Kansas City
Pierron, John B., Kansas City
Pifer, Lawrence H., St. Joseph
Pileggi, Felix A., N. Kansas City
Pilla, Lawrence A., St. Louis
Pingelton, William B., Columbia
Pinsker, Oscar T., Kansas City
Piper, August T., St. Louis
Piper, Donald K., Kansas City
Pipes, Keith E., Brentwood
Pipkin, Garrett, Kansas City
Pitsinger, Nolan B., St. Louis
Pittam, Radford F., Hutchinson, Kan.
(Member Jackson County Medical Society)
Pitts, Ferris N. Jr., St. Louis
Platt, William R., Clayton
Platz, John H., Carrollton
Plesons, John D., St. Louis
Plowman, Edward M., Hannibal
Plumlee, John E., Columbia
Plumlee, William C., Springfield
Plumpe, W. Tupper, St. Louis
Podrecca, Guido I., Springfield
Poggemeier, William H. Jr., St. Charles
Polk, George M., Kansas City
Polk, John W., Springfield
Pollack, Maxwell A., St. Louis
Pollock, Leo H., Kansas City
Poor, Carl W., Neosho
Pope, Charles H. Jr., Independence
Popp, Carl G., Sikeston
Porporis, Arthur A., St. Louis
Porter, Louis, Kansas City
Porter, Russell C., Seal Beach, Calif.
(Member Clay County Medical Society)
Porterfield, John F., Columbia
Portuondo, Bonaventura C., St. Louis
Poser, Charles M., Kansas City
Post, Cyril A., Poplar Bluff
Post, John P., Washington
Post, Lawrence T. Jr., St. Louis
Post, M. Hayward, St. Louis
Post, Winfred L., Joplin
Potashnick, Robert, St. Louis
Potter, Caryl A. Jr., St. Joseph
Potter, Lee G., Kansas City
Potter, Reese H., St. Louis
Potter, Thompson E., St. Joseph
Potts, Donald A., Independence
Powell, Charles B., Florissant
Powell, Earl A., St. Louis
Powell, Edwin M., Springfield
Powell, Robert G., Joplin
Powers, John M., Kansas City
Powers, Pierce W., St. Louis
Powers, William E., St. Louis
Pozsgay, Michael S., St. Louis
Pranger, Sylvester H., St. Louis
Prater, Bill G., Springfield
Prentiss, Harry S., Kansas City
Presnell, Cleitus A., St. Louis
Press, Maurice J., St. Louis
Preston, Albert Jr., Kansas City
Price, Charles H., Cassville
Price, Kenneth C., St. Louis
Printz, Joseph H., Kansas City
Printz, Otto J., Kansas City
Probst, Raymond E., St. Louis
Probstein, Jacob G., St. Louis
Proctor, Donald C., Sedalia
Proetz, Arthur W., St. Louis
Pruett, Burchard S., St. Louis
Pruett, Hubert S., St. Louis
Pruett, Paul L., Springfield
Pucci, Gregory L., Kansas City
Pugh, Richard G., Independence
Purcell, Harry K., New Delhi, India
(Member St. Louis Medical Society)
Purcell, Paul L., Smithville
(Member Marion-Ralls-Shelby County Medical Society)
Purkerson, Mabel L., St. Louis
Pyne, Herbert S., St. Louis

Q

Quer, Erich A., Kansas City
Quick, Richard T., St. Louis
Quistgard, Paul C., Kansas City

R

Rachlin, Maxwell, Brentwood
Rader, Ada B., Kansas City
Rader, Edward S., St. Louis
Rader, George B., St. Louis
Raemdonck, Alphonse J., St. Louis
Ragland, John E., Ballwin
Ragsdale, George M., Paris
Raich, Robert A., Kansas City
Rainey, Robert, St. Louis
Rainwater, Elmer H., Springfield
Rall, Kenneth L., Columbia
Ramey, Ehret O., Kansas City
Ramos, John F. Jr., Kansas City
Ramos, Raoul L., St. Louis
Ramsey, Robert H., Ferguson
Randall, Don Q., St. Charles
Rannie, Paul R., Independence
Rao, Carlo, St. Louis
Rapp, Earl L., Hannibal
Rapp, Harold B., Cape Girardeau
Rappold, H. O., St. Louis
Rawlins, Fred E., Cape Girardeau
Rawlins, Kelly, Holden
Ray, C. Thorpe, Columbia
Raybuck, Harry E., St. Louis
Ready, James H., Florissant
Reas, Herman W., St. Louis
Recant, Lillian, St. Louis
Rector, Joe L. Jr., Kansas City
Redington, James C. Jr., Clayton
Redmond, William, St. Joseph
Reeder, Charles C., New Madrid
Reese, A. Victor, St. Louis
Reeves, L. A., Columbia
Reh, Edward P., St. Louis
Rehm, Ralph, Bloomfield
Reich, Harry A., St. Louis
Reich, Oliver F., Kimmswick
Reichert, M. Cecelia, St. Louis
Reiches, Aaron J., St. Louis
Reid, James A., Marshall
Reider, Richard A., St. Louis
Reilly, Leo J., St. Louis
Reilly, Pierce J., St. Louis
Reineck, John A., St. Louis
Reinhard, Edward H., St. Louis
Reinhardt, George R., Kansas City
Reis, Carl J., St. Louis
Reister, Dorothy D., Kansas City
(Member St. Louis County Medical Society)
Reister, Philip D., Kansas City
Reitman, Stanley, St. Louis
Reitz, Carl H., Kansas City
Remley, George C., Kansas City
Rendleman, George F., St. Louis
Rendleman, George Jr., St. Louis
Rennard, Marvin, St. Louis
Repetto, Albert M., St. Louis
Repp, Theodore J., St. Louis
Reuter, Louis A., St. Louis
Revare, Paul, Kansas City
Revels, Harry III, St. Louis
Reynolds, Clarence C., Kansas City
Reynolds, Fred, St. Louis
Reynolds, Garland A., Cape Girardeau
Reynolds, James R., Neosho
Rhoades, Arthur B., Kansas City
Rhodes, Euhlan L., Warsaw
Rice, Carl E., Hillsboro
Rice, Earl R., Ft. Lauderdale, Fla.
(Member St. Louis Medical Society)
Rice, Grover C., Brunswick
Richards, Frank O., St. Louis
Richardson, George A., Union
Richardson, Marion W., Kansas City
Richardson, William D., Ghana, W. Africa
(Member Clay County Medical Society)
Richardson, William R., Union
Richert, Robert C., Kansas City
Richman, Elmer, St. Louis
Richter, William B., Stockton
Riddell, Richard V., St. Joseph
Ridings, G. R., Columbia
Ridings, Harold D., Cape Girardeau
Ridzon, Thomas J., St. Charles
Ries, Douglas A., St. Louis
Riffel, Gordon W., Bourbon
Rifkin, Shale M., St. Louis
Riggio, Salvatore N., St. Louis
Rigney, Levi M., Springfield
Riley, Charles T., Richmond
Riley, John J., St. Louis
Riley, Joseph P. Jr., Kansas City
Riley, William H., St. Louis
Riller, Lowell E., Kansas City
Rinck, Edward C., Nevada
Riordan, Lawrence M., St. Louis
Ritchie, Frances R., St. Louis
Ritter, Hubert A., St. Louis
Ritter, Paul J., St. Louis
Ritter, Raymond A., Cape Girardeau
Ritterbusch, James K., Fulton
Roark, Glenn E., Columbia
Roberts, Grosvenor G., Kansas City
Roberts, Harold K., Clayton
Roberts, Harold M., Kansas City
Roberts, John P., Kirkwood
Roberts, John R., St. Louis
Roberts, L. Marvin, Kansas City
Roberts, Paul A., Sweet Springs
Roberts, Sam E., Kansas City
Robertson, Frank G., St. Louis
Robertson, Robert C., Fulton
Robertson, William D., Poplar Bluff
Robertson, William D., Kansas City
Robichaux, Eugene B., Excelsior Springs
Robins, Eli, St. Louis
Robinson, Arthur W., Kansas City
Robinson, Edith C., St. Louis
Robinson, E. Kip, Kansas City
Robinson, George G., Humansville
Robinson, G. Wilse Jr., Kansas City
Robinson, John A., Edgerton
Robinson, William J., Leawood, Kan.
(Member Jackson County Medical Society)
Robison, James T. Jr., Kansas City
Roblee, Melvin A., St. Louis
Roche, Maurice B., St. Louis
Rodeman, John M., Sedalia
Rodes, Ned D., Mexico
Rodgers, Elrie P., Columbia
Rodgers, George H., Overland Park, Kan.
(Member Jackson County Medical Society)
Rodgers, Samuel U., Kansas City
Roehrs, Marvin E., Marshall
Rogers, Cyril H., St. Louis
Rogers, Donald B., Omaha, Nebr.
(Member Ozarks Medical Society)
Rogers, John A., St. Louis
Rogers, John T., St. Joseph
Rogers, Robert L., Kansas City
Rohlfing, Edwin H., St. Louis
Rohlfing, Walter H., St. Louis
Roller, Merrill J., Hannibal
Rollins, Harry D., Winona
Rolufs, Lloyd S., Kirkwood
Rolwing, E. Charles, Charleston
Ronald, Douglas C., Butler
Roodman, Herman J., Overland
Roos, Albert, St. Louis
Roper, Charles L., St. Louis
Roper, Stanley D., Ozark
Rose, Charles W., Kansas City
Rose, Dalton K., St. Louis
Rosecan, Marvin, St. Louis
Rosen, Charles S., St. Louis
Rosen, Max, Springfield
Rosenbaum, Harry D., St. Louis
Rosenbaum, Herbert E., St. Louis
Rosenfeld, Henry, St. Louis
Rosenstein, Daniel L., St. Louis
Rosenthal, Irwin I., St. Joseph
Ross Gilbert Jr., Columbia
Rost, William B., St. Joseph
Roter, Alexander M., St. Charles
Roth, John J., St. Louis
Rother, Paul H., St. Charles
Rothman, David, St. Louis
Rothweiler, Robert J., St. Louis
Roufa, Joseph F., St. Louis
Roulhac, George E., St. Louis
Rouse, David M., Mexico
Rouse, Ernest T., St. Louis
Rowlette, Avery P., Moberly
Roy, Joseph A., Jennings
Royce, James J., Sarcoxie
Royce, Robert K., St. Louis
Royse, Roy P., Sullivan
Royston, Grandison D., Hope, Ark.
(Member St. Louis Medical Society)
Rubenstein, Melvin, St. Louis
Rubin, Robert, St. Louis
Rubin, Sidney, Kansas City
Rubnitz, Leon H., Kansas City
Rudi, Herbert J., St. Louis
Rufe, John R., Kansas City
Ruff, T. Eugene, Poplar Bluff
Ruhling, Rudy, St. Louis
Rusan, Thomas E., St. Louis
Rush, Joseph C., Clearwater, Fla.
(Member St. Louis Medical Society
Rusk, Earl M., Camdenton
(Member Callaway County Medical Society)
Russell, Barbara E., Rolla
Russell, Earl D., Springfield
Russell, Herman E., St. Louis
Russell, James L., Kansas City
Russell, Joseph P., Jefferson City

Russell, Richard L., Kansas City
Russell, Robert K., Raytown
Rutledge, John F., Festus
Rutledge, William J., Campbell
Ryan, John B., Washington
Ryan, John H., St. Joseph
Ryan, John J., Clayton
Ryan, Robert E., St. Louis

S

St. John, Thomas C., St. Louis
Sabates, Felix N., Columbia
Sachar, Leo A., St. Louis
Saferstein, A. Lester, Kansas City
Sala, Jose M., Springfield
Saladino, Anthony, Kansas City
Sale, Llewellyn, St. Louis
Sale, Llewellyn Jr., St. Louis
Salisbury, William J., St. Louis
Sammons, Harry C., St. Louis
Samuelson, Edward A., Kansas City
Sanders, Donald C., Kansas City
Sanders, George E., Excelsior Springs
Sanders, Harmon U. Jr., Lawrence, Kan. (Member Jackson County Medical Society)
Sanders, J. S., Jefferson City
Sanders, Robert D., St. Louis
Sanders, Theodore E., St. Louis
Sanders, William F., Kansas City
Santanello, William M., St. Louis
Sante, LeRoy R., St. Louis
Santiago, Miguel, St. Louis
Santoro, Carlos G., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Saper, Philip, Lee's Summit
Sargent, Alden P., Sikeston
Sargent, John P., Sikeston
Sarno, Samuel M., Morehouse
Sasano, Joseph R. Jr., Kansas City
Sato, George, St. Louis
Satterfield, Val B., Chesterfield
Sauer, Gordon C., Kansas City
Sauer, W. Nicholas, St. Louis
Saunders, Everett L., Independence
Sawyer, Floyd E., Kansas City
Sawyer, James, St. Louis
Scanlon, Robert C., Springfield
Scarpellino, Louis, Kansas City
Schaan, Robert C., St. Louis
Schafer, George J., St. Louis
Schaefer, Glennon S. Jr., St. Louis
Schaerer, Jacques P., St. Louis
Schaerrer, William C., Kansas City
Schaper, Ernest H., St. Louis
Schattyn, Martyn, St. Louis
Schupmann, Gustav A., St. Louis
Schechter, Samuel E., St. Louis
Scheele, Paul M., St. Louis
Scheer, George E., St. Louis
Scheff, Harold, St. Louis
Scherman, Victor E., St. Louis
Schertz, Truman B., North Kansas City
Scheuber, Charles, Columbia
Schewe, Elmer J. Jr., Columbia
Schierman, William D., Clayton
Schiffmacher, Jack E., Kansas City
Schillie, Gene A., Kansas City
Schlansky, Seymour M., St. Louis
Schlenker, Lawrence, St. Louis
Schluer, Elmer P., St. Louis
Schmidt, Charles A., Gerald
Schmidt, Edwin H., St. Louis
Schmidt, Edmund M., St. Louis
Schmidt, Herbert H., Washington
Schmidt, J. H., Jefferson City
Schmiemeier, Roy H., St. Louis
Schmitz, Edgar F., St. Louis
Schneider, Sam, St. Louis
Schneider, Thomas A., St. Charles
Schoeberl, Cletus B., Joplin
Schoeck, Albert F., St. Louis
Schoentag, John S., St. Louis
Schopp, Alvin C., St. Louis
Schorer, Edwin H., Kansas City
Schottman, Gerhard W. Jr., Kansas City
Schranck, Charles R., St. Louis
Schroeder, Henry A., St. Louis
Schroff, Carle H., Springfield
Schuetz, Alfred, Fulton
Schulte, Gregory A., Joplin
Schultz, E. Robert, St. Louis
Schultz, Loraine E., Branson
Schultz, Samuel, St. Louis
Schupmann, Gustav A., Chesterfield
Schutz, Carl B., Kansas City
Schutz, Richard B., Kansas City
Schwartz, Eugene J., Springfield
Schwartz, Frederick O., St. Louis
Schwartz, Henry G., St. Louis
Schwartz, John T., Columbia
Schwartz, Melvin M., St. Louis
Schwartzman, Bernard, St. Louis
Schweiss, John F., St. Louis
Schweitzer, Fred C. Jr., Springfield
Sciortino, Gaspare, St. Louis
Sciortino, John S., St. Louis
Scokel, Paul W. III, St. Charles
Scopelite, Joseph A., St. Louis
Scorse, Sidney W., Joplin
Scott, Clive D., Louisiana
Scott, Elwin P., St. Louis
Scott, Horace W., St. Louis
Scott, Wendell G., St. Louis
Seabaugh, Dayton I. L., Jackson
Seabaugh, Loy R., Cape Girardeau
Seabaugh, Oda L., Cape Girardeau
Seabaugh, Ottis D., Webster Groves
Seabaugh, William O. L., Cape Girardeau
Seabold, John A., University City
Seddon, John W., St. Louis
See, William B., Columbia
Seeley, James J., St. Louis
Seely, Clark W., Kansas City
Seib, George A., St. Louis
Seidel, Donald R., Wright Patterson A.F.B., Ohio (Member St. Louis Medical Society)
Senn, Emmett J., Herculaneum
Senne, Herbert C., St. Joseph
Sennott, John S., Jefferson City
Senor, Samuel E., St. Joseph
Senturia, Ben H., St. Louis
Senturia, Hyman R., St. Louis
Serkes, Kenneth D., St. Louis
Sertl, John D., St. Louis
Sevastianos, Aristides E., St. Louis
Sevin, Omar R., Rockhall, Md. (Member St. Louis Medical Society)
Sewell, Minor F., Kansas City
Sewell, Walter S., Springfield
Sewing, Arthur H., St. Louis
Sexton, Daniel L., St. Louis
Sexton, Elmer E., St. Louis
Shackelford, Horace H., St. Louis
Shackleford, Elbert C., Kansas City
Shah, Anwar, St. Louis
Shahan, Philip T., St. Louis
Shaner, John F., St. Louis
Shank, Robert E., St. Louis
Shapiro, Lazare M., Kansas City
Shapleigh, John B., St. Louis
Sharp, Austin R., St. Louis
Shatz, Burton A., St. Louis
Shaw, Carvel T., Hermann
Shaw, Gordon, Mexico
Shaw, William J., Fayette
Shaw, William J. Jr., Fayette
Shea, James G., Gerald
Sheahon, John A., Kansas City
Shecter, Nathan, Kansas City
Sheets, John S., St. Louis
Sheets, Martin E., Chesterfield
Shelden, Russell D., Kansas City
Sheldon, John, Kansas City
Shelton, Earl W., St. Louis
Shelton, Edward O., Eldon
Shen, Jerome T. Y., St. Louis
Sheppard, Lee C. Jr., Columbia
Sherard, Julius C., St. Louis
Sheridan, Edmund R., St. Louis
Sherman, Alfred I., St. Louis
Sherry, Sol, St. Louis
Sherwin, Charles S., St. Louis
Shevlin, Charles F., St. Joseph
Shieber, William, St. Louis
Shiflet, Albert W., Wheeling
Shifrin, Alexander, Kansas City
Shireman, Kenneth L., Kansas City
Shires, Edward B., Leawood, Kan. (Member Jackson County Medical Society)
Shirey, Arnold G., Hayti
Shobe, Frank O., St. Louis
Shockley, Clarence J., Kansas City
Shofstall, Charles K., Kansas City
Shoss, Milton, Cape Girardeau
Shreffler, Algie R., Tavernier, Fla. (Member St. Louis Medical Society)
Shuey, Herbert H., Kansas City
Shull, George D., Jefferson City
Shuman, Joseph S., St. Louis
Shumate, L. St. Clair, Reeds Spring
Shyken, Herman, St. Louis
Shypper, Moses J., Kansas City
Siceluff, Joseph G., Springfield
Siegel, Carl D., Sedalia
Siegel, Irving, Kansas City
Siemers, George E., St. Louis
Siesener, Herbert H., St. Louis
Sievers, Edward F., Miami Beach, Fla. (Member St. Louis Medical Society)
Sights, Warren P. Jr., Columbia
Signorelli, Andrew J., St. Louis
Silsby, Don H., Springfield
Silsby, Don J., Springfield
Silsby, Harry D., Springfield
Silver, Bernd, St. Louis
Silverberg, Charles, St. Louis
Silvermintz, Saul D., Ladue
Simms, Otho M., St. Charles
Simon, David L., St. Louis
Simon, Jerome I., St. Louis
Simon, Nathan M., Clayton
Simon, Sanford, Shawnee Mission, Kan. (Member Jackson County Medical Society)
Simpson, Albert P., Springfield
Simpson, Eber, St. Louis
Simpson, Emerson L., Springfield
Simril, Wayne A., Clayton
Sims, William A. Jr., St. Louis
Sinclair, Alexander B., Kansas City
Singleton, John M. III, Kansas City
Sisk, James C., St. Louis
Sisson, Richard G., St. Louis
Skeffington, Mary J., St. Louis
Skilling, David M. Jr., St. Louis
Skillman, Robert K., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Skinner, John S., St. Louis
Skinner, John T., Kansas City
Sklenar, Donald E., St. Joseph
Slaughter, Shelby C., Fredericktown
Slentz, Edwin L., Kansas City
Slentz, William A., Kansas City
Slickman, Robert A., Kansas City
Sloan, Roy C., Marshall
Smart, Leon A., St. Louis
Smiley, William, St. Louis
Smit, Herbert M., St. Louis
Smith, Arthur B., Kansas City
Smith, Audra B., Sikeston
Smith, Benjamin F. Jr., St. Louis
Smith, C. Franklin, Willow Springs
Smith, C. Souter, Springfield
Smith, Carl C., Moberly
Smith, Clifton, St. Joseph
Smith, Dale C., Kansas City
Smith, Dermott, St. Louis
Smith, Edwin I., Kansas City
Smith, Frank J., St. Louis
Smith, Garland F., St. Louis
Smith, George E., Kirkwood
Smith, Grafton A., Columbia
Smith, Herbert P., St. Louis
Smith, Hubert E., Kansas City
Smith, Hugh R., St. Louis
Smith, Ira T., Kansas City
Smith, J. Earl, St. Louis
Smith, Jack I., St. Louis
Smith, James O., Clinton
Smith, Jason N. Jr., Columbia
Smith, Joe R., Columbia
Smith, John R., St. Louis
Smith, Katherine W., Kansas City
Smith, Kathleen, St. Louis
Smith, Milton, St. Louis
Smith, O. D., Mission, Kan. (Member Jackson County Medical Society)
Smith, Robert M., St. Louis
Smith, Robert S., Webster Groves (Member Pemiscot County Medical Society)
Smith, Robert W., Marceline
Smith, Roland T., Joplin
Smith, Rollin H., West Plains
Smith, Sidney E., St. Louis
Smith, Wallace B., Independence
Smith, William J., Windsor
Smith, William R., Carthage
Smolik, Edmund A., St. Louis
Smoller, Martin B., St. Charles
Smull, Ned W., Kansas City
Snead, William H. Jr., Springfield
Sneid, Philip, Kansas City
Snider, Samuel H., Kansas City
Snider, Wilbur R., Independence
Snyder, Edward N., St. Louis
Somers, John E., Columbia
Sommer, Conrad S., St. Louis
Sommer, Ross B., St. Louis
Soto, Peter J. Jr., St. Louis
Soule, Samuel D., St. Louis
Spafford, Allen L., Kansas City

Spalding, Donald G., St. Louis
Spalding, Wilber B., Plattsburg
Spalding, Wilber B. Jr., Kansas City
Sparkman, Thomas C., Cape Girardeau
Spears, Charles A., Branson
Spears, Joe L., Cabool
Spector, Gene W., St. Louis
Spelman, Archibald E., Smithville
Spence, Elbert L., Kennett
Spencer, Andrew D., St. Louis
Speno, Algelo A., St. Louis
Sperling, David, St. Louis
Spinzig, Edgar W., St. Louis
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Spoenemann, Walter H., St. Louis
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Spurgeon, Milo J., Columbia
Spurny, Otto M., Kansas City
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Stacy, Winton T., St. Joseph
Staehle, Melvin E., St. Louis
Staggs, William A., Kansas City
Staley, Harry R., Kansas City
Stallard, Donald J., St. Joseph
Stamp, Warren C., St. Louis
Stansbrough, Raymond A., St. Louis
Starke, Helen, Kansas City (Sister Paula Therese)
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Starkloff, Max, St. Louis
Statland, Harry, Kansas City
Statland, Morris, Kansas City
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Stein, Harry J., St. Louis
Stein, Joseph W., Kansas City
Stein, Leonard A., St. Louis
Stein, Martin F., St. Louis
Steinbeck, Herbert D., Union
Steinbeck, Herbert F., St. Louis
Steinberg, Franz U., St. Louis
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Stelle, Charles W., Kansas City
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Stephens, LeRoy J., St. Louis
Stephens, Louis F., St. Louis
Stephens, William A., St. Louis
Stephenson, Hugh E. Jr., Columbia
Stergen, Nick E., St. Louis
Sterkel, Richard L., St. Louis
Sterling, John A., Kirkwood
Stevens, Robert W., St. Louis
Stewart, Floyd, St. Louis
Stewart, Frances H., St. Louis
Stewart, John W., St. Louis
Stewart, Mark A., St. Louis
Stewart, Robert B., Springfield
Stewart, Robert H., Sedalia
Stewart, R. Wendell, Springfield
Stewart, Wendell K., Cape Girardeau
Stewart, William J., Columbia
Stewart, Worley K., El Dorado Springs
Stickle, Arthur W., St. Louis
Stickler, Ralph O., Kirksville
Stindel, Charles E., St. Louis
Stockton, Raymond W., Kansas City
Stockwell, A. Lloyd, Kansas City
Stokes, James M., St. Louis
Stolar, Jacob, St. Louis
Stone, Raymond F., Kansas City
Stoneman, William III, St. Louis
Stotts, Charles S., Prairie Village, Kan. (Member Jackson County Medical Society)
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Strauchen, Gilbert W., St. Louis
Strauss, Arthur E., St. Louis
Strauss, Carl F., Kansas City
Streetor, Roderick D., St. Louis
Strehlman, Benjamin G., Union
Stribling, Thomas L., Independence
Stricker, Emil A., St. James
Stricker, Harold C., Jefferson City
Strittmatter, James C., Caruthersville
Strominger, Donald B., St. Louis
Strong, Richard M., Hannibal
Stryker, Garold V., St. Louis
Stryker, William I., Ladue
Stuart, Byron M., Boonville
Stuart, Daniel D., Brunswick
Stuart, Wallace, Manchester
Stude, William C., St. Louis
Stuebner, Roland W., St. Louis
Stuerman, Lawrence G., Louisiana
Stufflebam, Robert E., Springfield
Sturtevant, Harwood N., Springfield
Stutsman, Albert C., St. Louis
Suba, Antonio R., St. Louis
Sudholt, Alfred F. Jr., St. Louis
Sugarbaker, Everett D., Jefferson City
Sugg, Winfred L., St. Louis
Sullivan, Clement J., St. Louis
Sullivan, William J., Providence, R. I. (Member North Central Counties Medical (Society)
Sullivan, William W., Glendale
Summers, Caldwell B., Kansas City
Summers, Jacob H., Lebanon
Summers, John B., St. Louis
Summers, Joseph S. Jr., Jefferson City
Summers, Thomas F., St. Louis
Sunderman, Raymond C., St. Louis
Sundstrom, Frank D., Springfield
Sunshine, Herbert, St. Louis
Susanka, William D., St. Louis
Susman, Irvin C., St. Louis
Susman, Noah, St. Louis
Sutherland, Gladys P., Bethany
Sutphin, John B., St. Louis
Sutter, Richard A., St. Louis
Sutton, Richard L. Jr., Kansas City
Swafford, Owen J., Senath
Swarm, Richard L., Bethesda, Md. (Member St. Louis Medical Society)
Sweany, Henry C., Mount Vernon
Sweet, Herbert C., Webster Groves
Sweets, Henry H. Jr., Hannibal
Sweiger, James H., Maysville
Swisher, Robert C., Kansas City
Switzer, Clyde, Merriam, Kan. (Member Jackson County Medical Society)
Swope, Joseph A., St. Louis
Sydow, Henry A., Fulton
Szabados, Ernest D., Independence
Szymanski, Stanley R., Moberly

T

Tadlock, Baxter W., St. Joseph
Tahir, Mohammad, St. Joseph
Talbott, Hudson, Louisville, Ky. (Member St. Louis Medical Society)
Tanaka, George M., St. Louis
Tanner, Robert H., Jefferson City
Tapp, Ernest M., Poplar Bluff
Tapper, Stephen M., St. Louis
Tarrasch, Ernest L., Springfield
Tarson, Solomon S., Kansas City
Tarver, Quinton, Kennett
Tarvydas, Francis, Edina
Tashma, Sigmund, St. Louis
Tasker, Charles B., Kansas City
Tate, Lloyd L., St. Louis
Taussig, Barrett L., St. Louis
Taute, Herman, St. Louis
Taylor, Eugene D., St. Louis
Taylor, Eugene T., St. Louis
Taylor, Helen L., St. Louis
Taylor, Leo T., Neosho
Taylor, Leon A., Jefferson City
Taylor, Van W., Bonne Terre
Taylor, William E., Springfield
Teall, Raymond E., Kansas City
Teare, Max E., Kansas City
Teiber, Frederick W., St. Louis
Tellez, Edward R., Fulton
Ternberg, Jessie L., St. Louis
Terrill, Robert S., Kansas City
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Thoma, George E. Jr., St. Louis
Thomas, Charles S., St. Louis
Thomas, Christopher Y., Kansas City
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Thomas, Horace E., Columbia
Thomasson, David D., Springfield
Thomasson, Mary W., St. Louis
Thomasson, Robert E., St. Louis
Thompson, Charles L., Kansas City
Thompson, Emma A. B., Columbia
Thompson, F. Gregg Jr., St. Joseph
Thompson, F. Gregg III, St. Joseph
Thompson, Ian M., Columbia
Thompson, J. William, St. Louis
Thompson, J. Williams III, University City
Thompson, Lawrence D., St. Louis
Thorn, Druery R., Leawood, Kan. (Member Jackson County Medical Society)
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Threlkeld, William L. Jr., Richmond, Va. (Member Jackson County Medical Society)
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Thurman, Hill C., Parkville
Thurmann, Manfred, St. Louis
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Tichenor, Robert W., St. Louis
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Tillman, Walter W. Jr., Springfield
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Towers, Orville W., St. Charles
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Turner, James H., Poplar Bluff
Turner, James K., St. Louis
Turner, Percy C., Kansas City
Turner, Rush, St. Louis
Turner, William F., Poplar Bluff
Tutera, Dominic F., Kansas City
Tuthill, Herbert, Kansas City
Tuttle, Jay F., Fulton
Twedell, Donald L., St. Louis
Twin, Edward J., Kansas City
Twyman, Richard A., Kansas City
Tygett, Glenn J., Cape Girardeau
Tygett, Joseph N., Cape Girardeau

U

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Ulett, Pearl C., St. Louis
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Underwood, Harry A., Kansas City
Underwood, Johnson Jr., Kansas City
Underwood, Millard K., Rolla
Underwood, Ross H., Kansas City
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Upsher, Albert E., Kansas City

Urban, Edgar D., Sikeston
Utley, James H., St. Louis
Utley, Joe R., Whiteman Air Force Base
(Member St. Louis Medical Society)
Utterman, William F., Perryville

V

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Valach, Frank J., Brentwood
VanBiber, James T., Independence
Van Buskirk, Terrance E., Kansas City
Van Buskirk, William C., Kansas City
Vanderpearl, Robert H., St. Louis
Vandiver, Virgil D., Chillicothe
Vandover, John T., St. Louis
VanGoidsenhoven, Guy, St. Louis
Van Matre, R. M., Washington, D. C.
(Member St. Louis Medical Society)
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Van Peenen, Hubert J., Columbia
Vatterott, Paul B., St. Louis
Vaughan, J. Russell, St. Louis
Vaughn, Arthur N., St. Louis
Vaughn, James W., Kansas City
Velasco, Ernest, St. Louis
Venable, H. Phillip, St. Louis
Verda, Dominic J., St. Louis
Vermillion, Crofford O., St. Louis
Vescovo, Paul C. Jr., Smithville
Vest, James C., St. Louis
Vezeau, Stephen, St. Louis
Viers, Wayne A., St. Louis
Vilmer, Charles, Kansas City
Vincent, Jack C., Kansas City
Vinyard, Jack L., Carrollton
Vinyard, Paul, St. Louis
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Virant, John A., St. Louis
Virden, Herbert H., Kansas City
Vitale, Anthony J., St. Louis
Vitale, Nicholas S., St. Louis
Vitt, Alvin E., St. Louis
Vitt, Edwin F., St. Louis
Viviano, Joseph G., St. Louis
Vizgird, Joseph J., St. Louis
Vogel, Eugene A., St. Louis
Vollmar, Clarence J., Webster Groves
Von Kaenel, Joseph E., St. Louis
Votaw, Robert E., St. Louis
Voth, Harold W., Kansas City
Vournas, Christopher G., St. Louis

W

Wacker, Leo L., St. Louis
Waddell, Kenneth E., Springfield
Waddle, Theodore L., Dexter
Wade, Frederick E., Kansas City
Wade, James P., St. Louis
Wadlow, Ernest E., St. Joseph
Wagenbach, William F., St. Louis
Waggoner, Charles M., Columbia
Waggoner, Sharon E., St. Joseph
Wagner, Paul J., Kansas City
Wakefield, Franklin H., Kansas City
Wakeman, Jasper N., Springfield
Wald, Stanley M., St. Louis
Walker, Ambrose T., Mammoth Springs, Ark.
(Member South Central Counties Medical Society)
Walker, Francis S., Clayton
Walker, George S., Clinton
Walker, Harvey Jr., University City
Walker, Hugh B., Clinton
Walker, James C., Kansas City
Walker, John W., Kansas City
Walker, Orville C. Jr., Independence
Walker, Paul W., Joplin
Walker, Willard B., Clayton
Walker, William M., Springfield
Wall, Albert, St. Louis
Wall, Emmett D., St. Louis
Wall, Harry C., Kansas City
Wall, Joe A., Houston
Wall, Leonard A., Kansas City
Wallace, Edgar S., Mexico
Wallace, Hilen K., Sun City, Ariz.
(Member Buchanan County Medical Society)
Walsh, James W., St. Louis
Walsh, Theodore E., St. Louis
Walsh, Thomas J., St. Louis
Walter, Archie L., Sedalia
Walter, Kenneth E., St. Louis
Walter, William L., St. Louis
Walters, Harold E., St. Louis
Walters, Henry W., St. Louis
Walters, John H., Columbia
Walters, Laura, Columbia
Walters, William H., St. Louis
Walterscheid, John H., Hannibal
Walther, Roy A. Jr., St. Louis
Walton, Franklin E., St. Louis
Walton, Marion C., Mountain View
Waltrip, Roy T. Jr., Sikeston
Wanamaker, John M., Rock Port
Ward, Joe, Lexington
Ward, Robert L., Centralia
Ward, Robert L., Kansas City
Warner, George K., Kirkwood
Warner, Robert G., St. Louis
Warren, T. Thomas, Potosi
Warres, Herbert L., Springfield
Washburn, J. Loren, Versailles
Washington, Edward L., Columbia
Wasserman, Helman C., St. Louis
Waterfield, Jim R., Springfield
Waterman, Franklin M., Liberty
Waters, E. Burton, Kirkwood
Waters, Hugh R., St. Louis
Watkins, George L. Jr., Farmington
Watson, Cecil L., Marshall
Watson, Ethel, Independence
Watson, Trevor F., Columbia
Wattenberg, Carl A., St. Louis
Watts, Byron E., Jefferson City
Waugh, George L., Kansas City
Waxman, David, Kansas City
Waxman, Jane Z., Kansas City
Wayland, Thomas A., Camdenton
(Member Cole County Medical Society)
Weakley, David R., Kansas City
Webb, Harry E., Kansas City
Webb, Leslie R. Jr., Springfield
Webb, Marion A., St. Louis
Webb, Paul B., St. Louis
Webb, Paul B. Jr., St. Louis
Webb, Paul K., St. Louis
Weber, Eugene P., St. Louis
Weber, J. R., St. Louis
Weber, Sol, St. Louis
Weber, William K., Bridgeton
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Webster, Roger W., Hayward, Calif.
(Member Jasper County Medical Society)
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Weeks, George R., Cape Girardeau
Weiford, Edward C., Kansas City
Weiler, Thomas J., St. Louis
Weinel, Francis G., St. Louis
Weinhaus, Robert S., St. Louis
Weinsberg, William C., St. Louis
Weinstein, Willy J., St. Louis
Weintraub, Herbert D., Columbia
Weintraub, Soloman A., St. Louis
Weir, Don C., St. Louis
Weir, Royal A., St. Louis
Weis, Matthew W., St. Louis
Weisbrod, Wilfred B., St. Louis
Weisman, Renate D., St. Louis
Weisman, Sol, St. Louis
Weiss, James M. A., Columbia
Weiss, Stuart, St. Louis
Weitman, Maximiliam, St. Louis
Welch, Hooper W., St. Louis
Welker, Joseph E., Kansas City
Well, Julius W., Palmyra
Wells, Donald E., Glasgow
Wells, John H., Kansas City
Welsh, Laurence C., St. Louis
Weltscheff, Christo A., Kansas City
Wempe, G. Raymond, Maryville
Wenneker, Alvin S., St. Louis
Wennerman, Sam F., St. Louis
Wentzel, Louis R., St. Louis
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Werner, Franklin C., Kansas City
Werner, William A., St. Louis
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Westrup, Ellsworth A., Webster Groves
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Weyerich, Leon F., St. Louis
Weygandt, Glenn R., St. Louis
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Wheeler, John H., Kansas City
Wheeler, Robert L., Harrisonville
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White, James S., Kansas City
White, Jefferson E. III, Columbia
White, Newton B., St. Louis
White, Orville O., St. Louis
White, R. Ned, Springfield
White, Stoughton F., Kansas City
White, William E., Kansas City
White, William H. Jr., St. Louis
Whitehead, Frank F., Neosho
Whiteman, John R., Kansas City
Whitener, Miles C., St. Louis
Whitener, Paul R., St. Louis
Whitman, Doyle C., Kansas City
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Whittaker, Charles K., Kansas City
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Wieman, Harry K., Joplin
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Wiles, Jack N., West Plains
Wilhelm, Warren F., Kansas City
Wilkinson, Charles B., Kansas City
Wilkinson, Everett A., Kansas City
Will, Leo A., Venice, Fla.
(Member St. Louis Medical Society)
Williams, Carol F., St. Louis
Williams, Charles S., Malden
Williams, Frank R., Kansas City
Williams, George P., Kansas City
Williams, Jerome, St. Louis
Williams, John M., Liberty
Williams, John W., Oak Grove
Williams, John W., Springfield
Williams, John W. Jr., Springfield
Williams, Joseph C. Jr., Kansas City
Williams, Luke E., Kansas City
Williams, Ray D., St. Louis
Williams, Robert A., Kansas City
Williams, Robert S., Mexico
Williams, Roland D., Kansas City
Williams, Starks J., Kansas City
Williams, Thomas A., Osceola
Williams, Vincent T., Kansas City
Williams, W. A. Jr., Cape Girardeau
Williamson, George L., Kansas City
Williamson, Oscar E., St. Louis
Williamson, Walter E., St. Louis
Willis, Norman E., Poplar Bluff
Willits, Lyle G., Kansas City
Willman, Charles R., St. Joseph
Willman, Vallee L., St. Louis
Willms, Janice L., St. Louis
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Willoughby, Jean B., Kansas City
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Wilson, Alice H., Joplin
Wilson, Charles F., Cape Girardeau
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Wilson, Fred K., Winston
Wilson, George P., Columbia
Wilson, Hester J., Kansas City
Wilson, Hugh M., St. Louis
Wilson, John E., West Plains
Wilson, Keith S., St. Louis
Wilson, Kenneth O., St. Louis
Wilson, Loys C., Kennett
Wilson, Roy E., Springfield
Wilson, Vernon E., Columbia
Wilson, Virgil R., Rosendale
Wilucki, Leo E., St. Louis
Wilucki, Melvin R., St. Louis
Wimmer, Warren J., St. Louis
Wimp, Jesse J., Kirksville
Windmiller, Myrl E., Columbia
Winegar, Alvon C., Jefferson City
Winer, Herbert J., Kansas City
Winkelman, Esther B., Kansas City
Winn, George W., Boonville
Winokur, George, St. Louis
Winston, Bernard H., Kansas City
Winter, John H., St. Louis
Winter, Tyrus D., St. Louis
Winterer, Roland A., St. Louis
Winters, Kathleen, St. Louis
Wipfler, Earl J. Jr., St. Charles
Wippo, Edgar W., St. Louis
Wirthlin, Edward H., St. Louis
Wise, George W., Kansas City

Wise, Gordon F., Springfield
Wissmath, Frank S., Clayton
Wissner, Seth, St. Louis
Withers, Orval R., Kansas City
Withrow, John B., Kansas City
Witt, Clyde M., St. Louis
Witt, Frederick W., St. Louis
Wittgen, Edward M., St. Louis
Wittler, Harry A., St. Louis
Wittmer, S. C., Springfield
Wolcott, Lester E., Columbia
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Wolfe, Edward, Topeka, Kan.
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Wolff, Harold D., St. Louis
Wolff, Paul G., Cape Girardeau
Wolfgram, Edwin D., St. Louis
Woltzen, Simon W., Clinton
Wommack, Fred L., Crane
Wood, Bennett R., St. Louis
Wood, George F., Fulton
Wood, George H., Carthage
Wood, James A., Clayton
Wood, William W., Springfield
Woods, Harold V., Blue Springs
Woods, Ralph E., Clayton
Woods, S. Dwight, Kansas City
Woods, Walton C., Kansas City
Woodward, William W., Independence
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Wooldridge, W. E., Springfield
Wooldridge, Wilfred E., Springfield
Woolf, Ralph B., St. Louis
Woolsey, Robert M., St. Louis
Word, Parker H., St. Louis
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Workman, George M., Hermann
Worley, Charles A., Sweet Springs
Wortmann, Robert F., Kansas City
Wotawa, William J., St. Louis
Wray, Rolla B., Nevada
Wright, John L., Poplar Bluff
Wright, Robert P., Kansas City
Wu, William Q., Kansas City
Wulff, George J. L. Jr., St. Louis
Wurr, Dieter, Kirkwood
Wurster, W. Joel, Kansas City
Wyatt, Lois C., Kirkwood

Y

Yaeger, Gerald A., St. Charles
Yancey, Daniel L., Springfield
Yanow, Mitchell, St. Louis
Yates, J. Lewis, Mount Vernon
Ylagan, Amando Jr., St. Louis
Yohe, Ruth M., Kansas City
Yore, Richard W., St. Louis
Yoskit, Harry, Festus
Youll, Donald V., Kansas City
Young, Calvin C. Jr., Joplin
Young, James E., Kansas City
Young, Jesse W., Kansas City, Kan.
(Member Jackson County Medical Society)
Young, Paul R., Kansas City
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Younge, Walter A., St. Louis
Younger, Anita, St. Louis
Younger, Ernest, St. Louis
Yuan, Louis S. K., St. Louis

Z

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Zahorsky, Theodore S., St. Louis
Zahrt, Frank H., Princeton
Zeffren, Joel L., St. Louis
Zeinert, Oliver B., St. Louis
Zellermayer, Jacob, Kansas City
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Ziegler, Dewey K., Kansas City
Zillgitt, George H., St. Louis
Zimmerman, Herbert B., Olivette
Zimmerman, Joseph A., Kennett
Zingale, Frank G., St. Louis
Zink, Oscar C., St. Louis
Zuber, Harold V., Kansas City
Zuckner, Jack, St. Louis
Zwart, Claude H., St. Louis
Zwirn, Benjamin H., St. Louis

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Long, Forrest C., Savannah
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AUDRAIN COUNTY MEDICAL SOCIETY
(Mexico)

Bradley, William W., Farber
Coil, Paul E., Mexico
Davis, Leonard L. Jr., 1415 S. Morris St.
Dwyer, Thomas L., 119 E. Love St.
Ector, Henry J., 314 S. Trinity St.
Epple, Kathryn C., 502 E. Monroe St.
Epple, Lawrence K., 502 E. Monroe St.
Gantt, Ernest S. Jr., 105 W. Monroe St.
Gracia, Charles L., Mexico
Jolly, Benjamin N., 112 N. Clark Ave.
Jolly, William H., 112 N. Clark St.
Kallenbach, G. P., 321 N. Washington St.
Lankford, Harold D., 117 E. Monroe St.
O'Brien, Harry F., Mexico
Rodes, Ned D., Mexico
Rouse, David M., 212 E. Monroe St.
Shaw, Gordon, Audrain Hospital
Wallace, Edgar S., 210 E. Monroe St.
Williams, Robert S., Kemper Bldg.
Ziegler, Anthony Jr., Vandalia

BARRY COUNTY
(Ozarks Medical Society)

BARTON-DADE COUNTY MEDICAL SOCIETY

Arnold, Herbert M., Lamar
Bauer, Harold A., Lockwood
Bickel, Vern T., Lamar
Cain, Alvin R., Lamar
Carroll, Thomas W., Lamar
Cowan, Watt O., Greenfield
Guldner, Edmond, Lamar
McNeel, Lee A. Jr., Greenfield

BATES COUNTY
(West Central Missouri Medical Society)

BENTON COUNTY MEDICAL SOCIETY

Logan, James A., Warsaw

BOLLINGER COUNTY
(Unorganized)

BOONE COUNTY MEDICAL SOCIETY
(Columbia)

Allen, Joseph E., Professional Bldg.
Allen, William C., 2401 Highland Drive
Almond, Carl H., 807 Stadium Road
Anderson, Philip C., 807 Stadium Road
Asel, Norman D., 807 Stadium Road
Austin, George N., 807 Stadium Road
Baker, A. Sherwood, 807 Stadium Road
Baker, James M., 16 South 10th St.
Battersby, Richard S., Candle Light Lodge
Baue, Arthur E., 19th and Lombard Sts., Philadelphia, Pa.
Bingham, Hal G., 807 Stadium Road
Black, Samuel P. W., 300 S. Glenwood St.
Brooke, Clement E., 186 Camino Road, Arcadia, Calif.
Brukardt, Diane, 807 Stadium Road
Bruner, Claude R., Professional Bldg.
Buesseler, John A., 807 Stadium Road
Bumgarner, James E., 1504 E. Broadway
Bumgarner, Roger W., Route 1
Burns, Thomas W., 310 E. Brandon Road
Capps, Eugene C., 807 Stadium Road
Chalkley, Judson I., Boone County Hospital
Chiasson, E. Chaille, 109 W. Broadway
Cochran, Donald Q., 1502 E. Broadway
Cooper, Maurice E., 1000 Wayne Road
Cope, James C., 1504 E. Broadway
Darnell, Thomas F. B., Doctors Clinic Bldg.
Davenport, James F., 807 Stadium Road
Denninghoff, James C., Stephens Bldg.
Dexheimer, Frank R., Professional Bldg.
Dietrich, Karl D., Professional Bldg.
Eggers, George W. N. Jr., 807 Stadium Road
Evans, Alden M., Ellis Fischel State Cancer Hospital
Froelich, Robert E., 807 Stadium Road
Fuchs, George J. Jr., 1026 Hickory Hill Drive
Galeota, William R., 807 Stadium Road
Garrett, Glen H., Professional Bldg.
Gaunt, William D., 807 Stadium Road
Gay, George R., 807 Stadium Road
Griffin, William T., 807 Stadium Road
Hall, David G., 807 Stadium Road
Hanlon, Russell C., 807 Stadium Road
Hardwicke, Henry M., Division of Health, Jefferson City
Haun, Cosmo L., 807 Stadium Road
Hemenway, William G., 807 Stadium Road
Jackson, Robert L., 807 Stadium Road
Johnson, Richard E., Boone County Hospital
Keats, Theodore E., University of Virginia Hospital, Charlottesville, Va.
Keown, Kenneth K., 807 Stadium Road
Kubin, Milford T., Ellis Fischel State Cancer Hospital
Lachance, Leopold, Centralia
Ladenson, Roland P., 16 S. Tenth St.
Landor, John H., 807 Stadium Road
Leech, Charles A., 1504 E. Broadway
Lewis, Ray B., 2012 Valley View Drive
Litwiller, R. W., 905 Virginia Ave.
Lodwick, Gwilym S., 208 Ridgeley Road
Logue, John T., 1504 E. Broadway
Lowney, John F., 807 Stadium Road
Lucas, Fred V., 807 Stadium Road
McElroy, Glenn L., 1500 E. Broadway
Mackenzie, James W., 807 Stadium Road
Marienfeld, Carl J., 807 Stadium Road
Martt, Jack M., 807 Stadium Road
Matovich, Violet B., 807 Stadium Road
Mayer, William D., 1000 Lakeshore Drive
Metzgar, Marshall T., 807 Stadium Road
Miller, Leroy J., Guitar Bldg.
Mitchell, Franklin L., 810 Greenwood Court
Modlin, John J., 706 Thilly Ave.
Moranville, Benedict A., 1504 E. Broadway
Neal, M. Pinson, 807 Stadium Road
Overholser, Milton D., 807 Stadium Road
Payne, John W., 1500 E. Broadway
Pearman, Carl C., 214 Texas St.
Pickard, Clarence M., 909 University Ave.
Pingelton, William B., 1006 Cherry St.
Plumlee, John E., 807 Stadium Road
Porterfield, John F., 80 East Drive
Rall, Kenneth L., 807 Stadium Road
Ray, C. Thorpe, 807 Stadium Road
Reeves, L. A., 807 Stadium Road
Ridings, G. R., 810 Yale Ave.
Roark, Glenn E., 807 Stadium Road
Rodgers, Elrie P., Box 157
Ross, Gilbert Jr., 807 Stadium Road
Sabates, Felix N., 807 Stadium Road
Scheuber, Charles, 1504 E. Broadway
Schewe, Elmer J. Jr., 1232 Sunset Drive
Schwartz, John T., 807 Stadium Road
See, William B., Professional Bldg.
Sheppard, Lee C. Jr., 608 Manor Drive
Sights, Warren P. Jr., 807 Stadium Road
Smith, Grafton A., 917 Crestland Ave.
Smith, Jason N. Jr., 701 West Blvd. S.
Smith, Joe R., Professional Bldg.
Somers, John E., 807 Stadium Road
Spratt, John S. Jr., 204 Leslie Lane
Spurgeon, Milo J., 404 Edgewood Ave.
Stephenson, Hugh E. Jr., 807 Stadium Road
Stewart, William J., 909 University Ave.
Thomas, Horace E., 1504 E. Broadway
Thompson, Ian M., 807 Stadium Road
Tinsley, John C. Jr., 16 So. Tenth St.
Van Peenen, Hubert J., 807 Stadium Road
Waggoner, Charles M., Professional Bldg.
Walters, John H., 11 So. Williams St.
Walters, Laura, 11 So. Williams St.
Ward, Robert L., Centralia
Washington, Edward L., 1504 E. Broadway
Watson, Trevor F., 1504 E. Broadway
Weintraub, Herbert D., 807 Stadium Road
Weiss, James M. A., 807 Stadium Road
White, Jefferson E. III, 104 E. Parkway Drive
Wiggins, Roland L., 201 N. Third St.
Wilson, George P., Professional Bldg.
Wilson, Vernon E., 807 Stadium Road
Windmiller, Myrl E., 1504 E. Broadway
Wolcott, Lester E., 109 Russell Blvd.

BUCHANAN COUNTY MEDICAL SOCIETY
(St. Joseph)

Allaman, John M., 439 Acacia Drive, Sarasota, Fla.
Ames, Mary B., 2318 Lovers Lane
Ames, William H., 902 Edmond St.
Augustine, Robert W., 902 Edmond St.
Bascom, Charles H., State Hospital No. 2
Beck, Paul M., Kirkpatrick Bldg.
Benson, Scott C., 324 N. 6th St.
Berney, Francis J., 1402 Faraon St.
Boteler, George M., 422 W. 47th St., Kansas City
Bristow, Robert B., Physicians & Surgeons Bldg.
Bryant, Sydney L., 902 Edmond St.
Butler, E. F., 902 Edmond St.
Carpenter, George T., 902 Edmond St.
Christ, Martin H., 6106 King Hill Ave.
Craig, Owen W. D., Kirkpatrick Bldg.
Craig, Richard O., Kirkpatrick Bldg.
Curran, Herbert A., 1302 Faraon St.
Day, Maxwell, Schneider Bldg.
Denton, Jimmy E., Ventura County Hospital, Ventura, Calif.
DuMont, Clement C., 1905 Francis St.
Ferguson, Luther J., 2907 Francis St.
Fisher, Joseph L., 7th & Jule Sts.
Forgrave, John R., 420 N. 8th St.
Forgrave, Leon P., 420 N. 8th St.
Forman, George W., P. O. Box 830
Fuson, Levi H., Kirkpatrick Bldg.
Grant, Claude S., 1302 Faraon St.
Greenberg, Charles, 10669 Rochester Ave., Los Angeles, Calif.
Grimes, Manning E., Kirkpatrick Bldg.
Gunter, Joe S., 902 Edmond St.
Handler, Eric, Physicians & Surgeons Bldg.
Harner, Casper G., 902 Edmond St.
Hayes, Paul W., 902 Edmond St.
Herman, Allen I., Physicians & Surgeons Bldg.
Howden, Thomas L., Kirkpatrick Bldg.
Hughes, Judson M., 903 Nichols St., Fulton
Hunt, William J., 2600 Pacific St.
Ide, Lucien W., P. O. Box 830
Kieber, Robert W., Kirkpatrick Bldg.
Kline, Carlyn M., 17 Stonecrest St.
Kline, Elmund W., Kirkpatrick Bldg.
Knepper, Paul A., P. O. Box 830
Knoke, Frederick W. Jr., 3425 Beck Road
Kratz, Frederick W., 1927 W. 152 Highway, Liberty
Kulowski, Jacob, 2404 Highly St.
Lee, Carleton H., 1402 Faraon St.
McDaniel, John R., 902 Edmond St.
McDonald, Wilbur P., 301 N. 8th St.
Maginn, Richard L., 223 N. 7th St.
Marston, F. James Jr., 902 Edmond St.
Martin, John N., Physicians & Surgeons Bldg.
Meluney, Solomon E., Kirkpatrick Bldg.
Minton, Robert S., Corby Bldg.
Moen, Berwyn H., 902 Edmond St.
Morse, Marvin, 2702 Faraon St.
Mothershead, John L., 2603 Frederick Ave.
Muench, Albert H., Physicians & Surgeons Bldg.
Mundy, Homer F., 2801 Sacramento Ave.
Nelson, Fred L., 902 Edmond St.
Ness, Carl K., 902 Edmond St.
O'Connor, William B., Kirkpatrick Bldg.
Petersen, Harold E., 2401 Frederick Ave.
Pettit, Manson B., P. O. Box 263
Pfeffer, Robert I., 1915 N. 29th St.
Pifer, Lawrence H., 1302 Faraon St.
Potter, Caryl A. Jr., Physicians & Surgeons Bldg.
Potter, Thompson E., 731 Faraon St.

Redmond, William, Corby Bldg.
Riddell, Richard V., 902 Edmond St.
Rogers, John T., 2502 Ashland Ave.
Rosenthal, Irwin I., 2715 Union Ave.
Rost, William B., 2221 N. W. Extension Blvd.
Ryan, John H., 301 N. 8th St.
Senne, Herbert C., 223 N. 7th St.
Senor, Samuel E., 722 Francis St.
Shevlin, Charles F., 902 Edmond St.
Sklenar, Donald E., 228 Illinois Ave.
Smith, Clifton, 2821 Ashland Ave.
Stacy, Winton T., 1215 N. 24th St.
Stallard, Donald J., 902 Edmond St.
Tadlock, Baxter W., 316 W. Noyes St.
Tahir, Mahammad, Box 66, Wyatt Park
Thomas, Forrest, State Hospital No. 2
Thompson, F. Gregg Jr., P. O. Box 830
Thompson, F. Gregg III, 902 Edmond St.
Tovar, Manuel, 324 N. 6th St.
Wadlow, Ernest E., Kirkpatrick Bldg.
Waggoner, Sharon E., 301 Illinois Ave.
Wallace, Hilen K., 10509 Oakmont Drive, Sun City, Ariz.
Weed, Randal W., 702 Jule St.
Whitsell, Ora E., 802 N. 23rd St.
Willman, Charles R., 2405 Frederick Ave.
Willumsen, Henry C., 902 Edmond St.

BUTLER-WAYNE-RIPLEY COUNTY MEDICAL SOCIETY
(Poplar Bluff)

Barbour, Marvin R., Kneibert Clinic
Beecher, Sheldon B., 1517 Rosedale Ave.
Biggs, Fred J. Jr., Kneibert Clinic
Boone, Richard, 403 Mount Valley St., Hot Springs, Ark.
Brandon, Walter L., P. O. Box 407
Brookreson, Alton F., 321 Oak St.
Caldwell, Fred, Kneibert Clinic
Canlas, Emilio M., 705 Pine Blvd.
Cline, Harold H., Piedmont
Dinelli, Frank E., 215 Oak St.
Engelhardt, Robert C., Kneibert Clinic
Gernstetter, Sangwill L., P. O. Box 473
Hansbrough, Eugene T., 623 Pine Blvd.
Harwell, J. Lester, 10 Plaza Apartments, St. Louis
Hendrickson, Hardin O., 215 Oak St.
Johnson, Frank C., Doniphan
Kneibert, Fred L., Kneibert Clinic
Leroux, Gene, Doniphan
Loughead, John R., West Maude St.
McLain, Bobby M., 724 Cynthia St.
McPheeters, James W. Sr., 330 N. 2nd St.
Macauley, Bernard J., 215 Oak St.
Markel, Arthur D., Kneibert Clinic
May, Albert L. Jr., 330 N. 2nd St.
Miller, David V., Kneibert Clinic
Parker, Arthur C. Jr., Kneibert Clinic
Post, Cyril A., 123 S. Broadway
Robertson, William D., Poplar Bluff
Ruff, T. Eugene, Kneibert Clinic
Tapp, Ernest M., 1401 Lurlyn Road
Turner, James H., 217 Oak St.
Turner, William F., 217 Oak St.
Willis, Norman E., 218 N. Broadway
Wright, John L., 320 N. 2nd St.

CALDWELL COUNTY
(Grand River Medical Society)

CALLAWAY COUNTY MEDICAL SOCIETY
(Fulton)

Anderson, William H., State Hospital No. 1
Brown, John J., 101 E. 6th St.
Brown, Katherine S., 1304 Vine St.
Cremer, William J., State Hospital No. 1
Crews, Robert N., 612 Court St.
Durst, Henry, 610 Court St.
Freund, Harold G., Veterans Administration Hospital, Jefferson Barracks
Gish, Rutledge, 5 E. 5th St.
Groce, George, 607 Court St.
Hill, James E., 607 Court St.
Hunter, James R., Webster Groves
Jackson, Vernon B., 600 E. 2nd St.
Kepler, Earl C., State Hospital No. 1
Peterson, Donald B., State Hospital No. 1
Ritterbusch, James K., State Hospital No. 1
Robertson, Robert C., State Hospital No. 1
Rusk, Earl M., Camdenton
Schuetz, Alfred, State Hospital No. 1
Sydow, Henry A., 1014 Chippewa Drive
Tellez, Edward R., 207 Lynn Ave.
Tuttle, Jay F., State Hospital No. 1
Wood, George F., 614 Market St.

CAMDEN COUNTY

Garrison, T. W., Camdenton (Member Mid-Missouri County Medical Society)
Holley, Donald B., Camdenton (Member Mid-Missouri County Medical Society)
Rusk, Earl M., Camdenton (Member Callaway County Medical Society)
Wayland, Thomas A., Camdenton (Member Cole County Medical Society)

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY
(Cape Girardeau)

Alyea, J. O., 1869 Drury Lane
Ashley, Hugh V., 234 N. Sprigg St.
Ashley, Hugh Jr., 234 N. Sprigg St.
Bahn, Charles F., 1902 W. Broadway
Barnes, Seth S., 1854 Broadway
Blankenship, Dale M., 1930 Broadway
Burford, Edwin K. Jr., 937 Broadway
Campbell, Edward D., 937 Broadway
Chapman, Jean A., 1902 W. Broadway
Cochran, Jo R., 24 N. Sprigg St.
Crites, Edward, Sedgewickville
Crowe, John T., 937 Broadway
Elrod, Dennis B., 1912 Broadway
Estes, Albert M., 714 Broadway
Ford, Walter W., Gordonville
Hall, Frank W., 1912 Broadway
Hecker, Joseph E., Jackson
Herbert, Charles T., 824 Good Hope St.
Holcomb, John K., 24 N. Sprigg St.
Hoxworth, Gerald M., 210 Christine St.
Jaeger, Joseph N., Jackson
Johnson, Earl W., 937 Broadway
Juden, Alexander G., 4 S. Spanish St.
Jung, J. Marshall, Illmo
Kasten, Melvin C., 1453 Themis St.
Keim, John H., 230 N. Sprigg St.
Kinder, James A., 937 Broadway
Kratz, Paul E., 1912 Broadway
Laffoon, Robert G., Illmo
Lovinggood, Thomas A., 649 Sylvan Lane
McDonald, Eugene F., Jackson
McGinty, Charles P., 1912 Broadway
Magaletta, George E., 937 Broadway
Nunnelly, Gordon M., 1924 Broadway
Nussbaum, Paul B., 1858 Broadway
Oehler, William F., 234 N. Middle St.
Otto, Thomas G., 1912 Broadway
Parsons, D. LeRoy, 24 N. Sprigg St.
Rapp, Harold B., 1011 N. Henderson St.
Rawlins, Fred E., 1607 Berthing Ave.
Reynolds, Garland A., 826 Themis St.
Ridings, Harold D., 937 Broadway
Ritter, Raymond A., 1912 Broadway
Seabaugh, Dayton I. L., Jackson
Seabaugh, L. R., 219 N. Pacific St.
Seabaugh, Oda L., 24 N. Sprigg St.
Seabaugh, William O. L., 24 N. Sprigg St.
Shoss, Milton, 937 Broadway
Sparkman, Thomas C., 210 Christine St.
Terry, James W. Jr., 219 N. Pacific St.
Tygett, Glenn J., 215 N. Sprigg St.
Tygett, Joseph N., 1912 Broadway
Weeks, George R., 1728 Bessie Ave.
Williams, W. A. Jr., 24 N. Sprigg St.
Wilson, Charles F., 714 Broadway
Wolff, Paul G., 1819 Broadway

CARROLL COUNTY
(Grand River Medical Society)

CARTER-SHANNON COUNTY MEDICAL SOCIETY

Rollins, H. D., Winona

CASS COUNTY
(West Central Missouri Medical Society)

CEDAR COUNTY
(West Central Missouri Medical Society)

CHARITON-MACON-MONROE RANDOLPH COUNTY MEDICAL SOCIETY

Arnold, Eugene L., Veterans Administration Hospital, Jefferson Barracks
Baker, Josephine D., Moberly
Barnett, Floyd A., Paris
Campbell, James E., Macon
Chute, W. Deward, Moberly
Cohrs, Clarence C., Moberly
Collins, Gretchen D., Macon
Dreyer, Philip V., Huntsville
Eggleston, Donald E., Macon
Fleming, J. Will Jr., Moberly
Fleming, Thomas S., Moberly
Harms, Florian L., Salisbury
Hasson, Robert, Moberly
Huber, Lasley E., Moberly
Miller, D. Herbert, 4410 Denison St., Muskogee, Okla.
Miller, Howard S., Macon
Ragsdale, George M., Paris
Rice, Grover C., Brunswick
Rowlette, Avery P., Moberly
Smith, Carl C., Moberly
Streetor, Roderick D., 245 Union Blvd., St. Louis 8
Stuart, Daniel D., Brunswick
Szymanski, Stanley R., Moberly
Young, Robert H., Moberly

CHRISTIAN COUNTY
(Ozarks Medical Society)

CLARK COUNTY
(Lewis-Clark-Scotland County Medical Society)

CLAY COUNTY MEDICAL SOCIETY

Adams, Howard D., 114 N. Water St., Liberty
Allain, James J., 2022 Swift St., N. Kansas City 16
Allan, James R., 110 E. Broadway, Excelsior Springs
Arst, Herbert E., 7529 N. Tracy St., Kansas City 18
Balhuizen, John, 2730 S. Mall, Kansas City 19
Bates, George C., 2730 S. Mall, Kansas City 19
Boone, Daniel S., 5800 N. Grand Ave., Kansas City 18
Bowles, Richard P., 112 N. Water St., Liberty
Bruce, Paul C., 115 S. Titus Ave., Excelsior Springs
Burke, E. K., 5140 Antioch Rd., Kansas City 19
Chastain, Maurice W., 2016 Swift Ave., N. Kansas City 16
Chiles, David R., Box 238, Smithville
Dunham, Robert H., 2025 Swift Ave., N. Kansas City 16
Dwyer, Reinhardt D., 405 E. 19th St., N. Kansas City 16
Edwards, Theodore F., 2029 Burlington St., Kansas City 16
Fakhoury, Donald A., 4030 N. Oak St., Kansas City 16
Fischer, Edward H., 306 E. 21st Ave., N. Kansas City
Fowler, I. Charles, 2025 Swift Ave., N. Kansas City 16
Galbol, Harley, Box 950, Excelsior Springs
Gauer, Robert J., 2730 S. Mall, Kansas City 16
Hall, James W., 5140 Antioch Road, Kansas City 19
Hayes, Lawrence L., 8400 N. Oak Trafficway, Kansas City 18
Haynie, William W., 2025 Swift Ave., N. Kansas City 16
Hedges, Richard C., 402 St. Louis Blvd., Excelsior Springs
Hendren, Glenn W., 114 N. Water St., Liberty
Hobbs, Earl B., Smithville
Hodge, Robert H., 2029 Burlington St., N. Kansas City 16
Houck, Russell M., Veterans Administration Hospital, Kecoughtan, Va.
King, Phillip E., 101 W. Kansas St., Liberty
Knox, Earl R., Rialto Bldg., Kansas City 6
Kuenzi, Donald E., 8400 N. Oak St., Kansas City 55
Langhus, Melvin O., 104 W. Englewood Road, N. Kansas City 18
Love, Drury M., Overbrook Road, Jefferson City
McCormick, James E., 4030 N. Oak St., Kansas City 16

McCracken, Samuel R., 107 W. Spring St., Excelsior Springs
Marsh, Wallace S., 4157 Strategic Wing, APO 937, Seattle, Wash.
Meador, Murray W., Smithville Clinic, Smithville
Mullins, Bernard L., 405 E. 19th St., N. Kansas City 16
Musgrave, David E., Excelsior Springs
Parker, Robert H., 2005 Fayette St., N. Kansas City
Pate, Otho S., Pioneer Bldg., N. Kansas City
Perry, Lawrence L. Jr., 6300 N. Lenox St. 51
Petersen, Eugene G., 6712 N. Oak St., Trafficway, Kansas City 18
Pileggi, Felix A., 405 E. 19th St., N. Kansas City 16
Porter, Russell C., 1351 Weeburn Rd., Seal Beach, Calif.
Revare, Paul, 4100 Vivion Rd. E., Kansas City 19
Richardson, William D., Baptist Medical Center, Nalerigu Via Gambaga, Ghana, West Africa
Roberts, L. Marvin, 5140 Antioch Road, Kansas City 19
Robichaux, Eugene B., 116 South St., Excelsior Springs
Sanders, George E., 116 South St., Excelsior Springs
Sawyer, Floyd E., 2730 S. Mall, Kansas City 19
Schertz, Truman B., 2022 Swift Ave., N. Kansas City 16
Spelman, Archibald E., Smithville
Sportsman, Weldon L., 6309 N. Grand Ave., N. Kansas City 16
Vescovo, Paul C., Smithville
Waterman, Franklin M., Liberty
Waugh, George L., 2730 S. Mall, Kansas City 19
Werner, Dean F., 2025 Swift Ave., N. Kansas City 16
Werner, Franklin C., 5140 Antioch Road, Kansas City 19
Williams, John M., 32 S. Main St., Liberty
Willoughby, James W., 32 S. Main St., Liberty
Withrow, John B., 5140 Antioch Road, Kansas City 19
Zacharias, David L., R. 2, Box 509, Kansas City 52

CLINTON COUNTY MEDICAL SOCIETY

Kimes, Ira D., Cameron
Luckenbill, Paul T., Plattsburg
Mabrey, John P., Plattsburg
Netherton, George F., Cameron
Spalding, Wilber B., Plattsburg

COLE COUNTY MEDICAL SOCIETY
(Jefferson City)

Belden, Edgar A., State Office Bldg.
Belinson, Louis, State Office Bldg.
Bowe, Edwin E., 401 N. Ridgway St.
Bregant, Robert E., 1017 Laurel Drive
Bruce, James G., Central Missouri Trust Bldg.
Clark, Kendall A., 515 E. High St.
Cox, William A., 105 E. High St.
Doyle, Matthew J., 515 E. High St.
Enloe, Lawrence D., Trust Bldg.
Exon, C. Stuart, 515 E. High St.
Fullgrabe, E. A., State Office Bldg.
Garner, Lynn M., State Division of Health
Gordon, James S., 515 E. High St.
Guhleman, Henry V. Jr., Medical Arts Bldg.
Gurnee, Landon H., 515 E. High St.
Handler, Fred P., 95 E. Circle Drive
Kanagowa, Hajime H., Medical Arts Bldg.
Kelly, Marshall W., 507 E. High St.
Klebba, Larry B., P. O. Box 403
Leslie, J. Paul, 933 Fairmount Blvd.
Leslie, James T., 4612 Hanford Lane, Louisville, Ky.
Leslie, James T. Jr., 214 Jackson St.
Loyd, Earl L., Jefferson Bldg.
McHaney, John W., 606 E. High St.
McKnelly, William V., 507 E. High St.
Mansur, Edward E., RFD 2, Box 629D, Stuart, Fla.
Matthews, John I., 302 Bolivar St.
Maxey, Hugh W., Box 236
Meier, Francis X., 1913 Haysilton Drive
Meinershagen, Charles W., 138 Forest Place
Melia, Bernard J., Jr., Medical Arts Bldg.
Ossman, Julian A., 2505 W. Main St.
Russell, Joseph P., Division of Health
Sanders, J. S., 515 E. High St.
Schmidt, J. H., 515 E. High St.
Sennott, John S., 515 E. High St.
Shull, George D., 521 E. High St.
Stauffer, Harry B., Central Trust Bldg.
Stephan, August P., 98 W. Circle Drive
Stricker, Harold C., 515 E. High St.
Sugarbaker, Everett D., 503 E. High St.
Summers, Joseph S. Jr., 515 E. High St.
Tanner, Robert H., 1608 Greenberry Road
Taylor, Leon A., 129 E. High St.
Tietjen, Frederick O., 213 Jackson St.
Watts, Byron E., 515 E. High St.
Wayland, Thomas A., Box 239, Camdenton
Winegar, Alvon C., 515 E. High St.

COOPER COUNTY MEDICAL SOCIETY
(Boonville)

Abele, William A., 329 Main St.
Avery, Willard B., 329 Main St.
Beckett, Theodore C., 317 Main St.
Boley, James O., 3200 E. Meyer Blvd., Kansas City 5
Chamberlain, Gilbert L., 315 Center Ave.
Diekroeger, Manuel L., R. D. 1
Hata, Daikichi, 329 Main St.
Humphreys, Edward T., 329 Main St.
Stuart, Byron M., 329 Main St.
Winn, George W., 329 Main St.

CRAWFORD COUNTY
(Mid-Missouri County Medical Society)

DADE COUNTY
(Barton-Dade County Medical Society)

DALLAS-HICKORY-POLK COUNTY MEDICAL SOCIETY

Barnett, Charles H., Bolivar
Brooks, John M., 840 S. Pickwick St., Springfield
Griffin, Mary E., Buffalo
Griffin, Olin A. Jr., Buffalo
Harrell, Henry J., Morrisville
Koon, Ben H., Bolivar
McCraw, Doyle C., Bolivar
Robinson, George G., Humansville

DAVIESS COUNTY
(Grand River Medical Society)

DEKALB COUNTY
(Grand River Medical Society)

DENT COUNTY
(Mid-Missouri County Medical Society)

DOUGLAS COUNTY
(South Central Counties Medical Society)

DUNKLIN COUNTY MEDICAL SOCIETY

Baldwin, Paul, Kennett
Beal, Homer, Malden
Benson, Leo J. Jr., Kennett
Cash, Charles R., Kennett
Croom, Dorwyn W., Malden
Crow, Asa A., Cardwell
Dempsey, Davis T., Kennett
Dunmire, George Q., Kennett
English, Wallace D., Cardwell
Hopkins, Florian G., Gideon
Joffe, Irwin, 628 W. Garland St., Paragould, Ark.
Miltenberger, Paul C., Kennett
Morehead, William E., Malden
Palenske, Robert L., Hornersville
Peck, Chester R. Jr., Kennett
Rutledge, William J., Campbell
Spence, Elbert L., Kennett
Swafford, Owen J., Senath
Tarver, Quinton, Kennett
Williams, Charles S., Malden
Wilson, Loys C., Kennett
Zimmerman, Joseph A., Kennett

FRANKLIN-GASCONADE-WARREN COUNTY MEDICAL SOCIETY

Bonney, Samuel C., Washington
Bozzo, Raymond J., Washington
Brenner, Paul A., Owensville
Crawford, Robert M., Sullivan
de la Torre, John J., Sullivan
Denny, Hubert M., Union
Eisenmann, Benjamin P., New Haven
Eyermann, H. Walter, Warrenton
Giem, Ross N., Sullivan
Heutel, Lee B., Union
Hoelscher, Harold F., Warrenton
Johnson, Grover C., Marthasville
Mays, Frank G., Washington
Mollenhoff, Robert W., Washington
Muench, Ludwig O., Washington
Pearl, John F., St. Clair
Post, John P., Washington
Richardson, George A., Union
Richardson, William R., Union
Royse, Roy P., Sullivan
Ryan, John B., Washington
Schmidt, Charles A., Gerald
Schmidt, Herbert H., Washington
Shaw, Carvel T., Hermann
Shea, James G., Gerald
Steinbeck, Herbert D., Union
Strehlman, Benjamin G., Union
Wepprich, Michael S., Washington
Workman, George M., Hermann

GASCONADE COUNTY
(Franklin-Gasconade-Warren County Medical Society)

GENTRY COUNTY
(Northwest Missouri Medical Society)

GRAND RIVER MEDICAL SOCIETY
(Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb Counties)

Allen, Erroll W., Carrollton
Bales, Eugene L., Carrollton
Bohnsack, Ralph W., Brookfield
Brennan, Raymond J., Chillicothe
Brewer, Lake, Ridgeway
Brownfield, Samuel T., Brookfield
Broyles, Watkins A., Bethany
Carpenter, George W., Chillicothe
Carter, Howard, Hamilton
Clark, Chester L., Trenton
Conrad, Joseph, Chillicothe
Cross, Albert D., Trenton
Cullers, Charles H., Trenton
Daley, Frank R., Hamilton
Dixon, John R., Brookfield
Dowell, Donald M., Chillicothe
Dowell, J. Larry, Pattonsburg
Duffy, Oliver F., Trenton
Ellsworth, Willard, Cainsville
Fair, William L., Chillicothe
Fuson, William A., Trenton
Gale, Joseph F., Chillicothe
Gary, George, Marceline
Gearhart, Merriam, Bethany
Gentry, Merritt L., Chillicothe
Hoenig, Hector F. Jr., Bethany
Horner, Glennon A., Marceline
Howell, Billy D., Brookfield
Kimberlin, Herbert C., Trenton
McArtor, Thomas R., Browning
Magill, Joseph S., Milan
Mairs, Edgar J., Trenton
Mandler, George, Chillicothe
Nixon, Edward E., Gallatin
Pemberton, Charles W., State Board of Health, Helena, Mont.
Perry, John M., Princeton
Platz, John H., Carrollton
Shiflet, Albert W., Wheeling
Smith, Robert W., Marceline
Staton, R. Hamilton, Carrollton
Sutherland, Gladys P., Bethany
Sweiger, James H., Maysville
Thompson, Emma A. B., Dumas Apartments, Columbia
Todd, Paul C., Carrollton
Vandiver, Virgil D., Chillicothe
Vinyard, Jack L., Carrollton
Wilson, Fred K., Winston
Zahrt, Frank H., Princeton

GREENE COUNTY MEDICAL SOCIETY
(Springfield)

Allen, Jerry H., 1211 S. Glenstone St.
Allison, James B., 600 S. Glenstone St.
Anthony, Dallas D., Professional Bldg.
Ash, Charles J., 743 Riverside Drive
Ashley, Thomas E., 1211 S. Glenstone St.
Atkinson, Thomas E. Jr., 609 E. Cherry St.

Auner, Cecil R., 600 S. Glenstone St.
Baldwin, Richard, 600 S. Glenstone St.
Bonebrake, MacDonald, Professional Bldg.
Box, Ernest M., 412 E. Commercial St.
Brown, Alex L., 1636 S. Glenstone St.
Brown, James T., 1653 S. National St.
Brown, Lyman D., 311 College St.
Burkey, Jordan W., Professional Bldg.
Busiek, Erwin F., Professional Bldg.
Busiek, Paul J., Professional Bldg.
Busiek, Urban J., Professional Bldg.
Callaway, Guy D., 1155 S. Delaware St.
Calaway, Guy D. Jr., 1211 S. Glenstone St.
Christy, Raymond A. Jr., 1211 S. Glenstone St.
Clarke, Michael J., 1636 S. Glenstone St.
Clary, William F., 1636 S. Glenstone St.
Clawson, James W., Professional Bldg.
Clayton, Edgar L., Professional Bldg.
Cochran, Thomas E. Jr., 2423 Brentwood Blvd.
Coller, Frederick C., 2433 Marlan St.
Conrad, Raymond C., 609 Cherry St.
Crawford, Oral B., Professional Bldg.
Cunningham, Darral D., 1715 Boonville Ave.
Deininger, James V., 1630 N. Jefferson Ave.
Delzell, William A., McDaniel Bldg.
Dietz, M. Wendell, Burge Protestant Hospital
Dillard, Erin M., Professional Bldg.
Dills, Joseph N., 1715 Boonville Ave.
Dolan, Daniel L., Professional Bldg.
Duncan, Robert D., 1534 E. Sunshine Blvd.
Eastwood, Robert A., 1934 Rosebrier St.
Elkins, Ronald F., Professional Bldg.
Ellis, Francis J., Professional Bldg.
Evans, Ezra L. Jr., Professional Bldg.
Farthing, Fred R., 1234 E. Walnut St.
Farthing, Gene W., 1636 S. Glenstone St.
Feller, Charles E., 1523 N. Jefferson St.
Ferguson, John P. Jr., 1219 S. Clay St.
Ferrell, Thomas E. Jr., 1534 E. Sunshine Blvd.
Fessenden, Ersel M., 634 Kingsbury St.
Fitch, C. H. Max, 1711 Boonville Ave.
Focht, Ralph H., Strafford
Francis, William C., 600 S. Glenstone St.
German, Walter A. Jr., 1211 S. Glenstone St.
Giddings, Frank C., Burge Protestant Hospital
Glenn, Elmer E., Cedar Point Road, Forsyth
Glynn, Robert R., 1211 S. Glenstone St.
Gorelick, David F., Professional Bldg.
Gose, Don F., 1550 E. Sunshine Blvd.
Hahn, Andrew L., Professional Bldg.
Hall, David W., 2122 Wayland Drive
Hall, Durward G., 2442 S. Fremont St.
Hanan, Ernest B., 724 E. Kingsbury St.
Hanss, Armand W., 600 S. Glenstone St.
Harvey, Harold D., 1531 E. Sunshine Blvd.
H'Doubler, Charles E., Professional Bldg.
H'Doubler, Francis T. Jr., Professional Bldg.
H'Doubler, Peter B., 430 South Ave.
Hogeboom, George W., P. O. Box 1017, Delray Beach, Fla.
Hollis, Richard W., Professional Bldg.
Holmes, Daniel E., 600 S. Glenstone St.
Holmes, David R., 1636 S. Glenstone St.
Hoover, H. Lee Jr., 1330 E. Walnut St.
Horst, Otto C., Medical Arts Bldg.
Horton, James D., Professional Bldg.
Hulstra, Johannes F. W., 1211 S. Glenstone St.
Ivy, Henry B., 600 S. Glenstone St.
Jameson, James E., Professional Bldg.
Johnson, George A., 2734 Luster Ave.
Johnson, George L. Martin Army Hospital, Fort Benning, Ga.
Johnson, Warford B., Professional Bldg.
Johnson, William F., Professional Bldg.
Johnston, Joseph L., 2855 Southern Hills Blvd.
Jorel, Louis E., 1500 E. Sunshine Blvd.
Key, James S., Professional Bldg.
Klingner, George M., 1630 N. Jefferson St.
Knabb, Arthur D., 1630 N. Jefferson St.
Knabb, Harris, 1630 N. Jefferson St.
Knabb, Henry F. Jr., 1630 N. Jefferson St.
Knabb, Kenneth E., 1630 N. Jefferson St.
Kolze, Vernon W., 600 S. Glenstone St.
Langston, Walter R., Professional Bldg.
Leidinger, Karl J., Republic
Lemmon, George B., 1101 E. Walnut St.
Lemmon, G. Bruce Jr., Professional Bldg.
Leslie, James F., 1715 Boonville Ave.
Lewis, Noel R., Burge Protestant Hospital
Litton, Lyle D., Burge Protestant Hospital
Lockhart, Charles E., Professional Bldg.
Lorenc, Ernest, Professional Bldg.
Lowe, Horace A. Jr., Medical Arts Bldg.
Lurie, Harold H., 600 S. Glenstone St.
McAlhany, Howard J., 609 Cherry St.
Maddux, William P., Professional Bldg.
Maher, Robert W., Professional Bldg.
Maple, Francis M., 1211 S. Glenstone St.
Menchetti, Don E., 1630 N. Jefferson St.
Meyer, Claude B., Route 1, Nixa
Morton, Paul C., 1508 E. Stanford St.
Moseley, F. Thomas, 2837 Lomita Court
Musick, James D., Medical Arts Bldg.
Napper, Marvin L., Professional Bldg.
Neu, Leo T. Jr., 3008 Carlisle Circle
Overend, Don S., 1211 S. Glenstone St.
Palcheff, Chris L., 1636 S. Glenstone St.
Park, William I. Jr., Professional Bldg.
Penninger, William H., 600 S. Glenstone St.
Peterson, Stanley S., 1211 S. Glenstone St.
Plumlee, William C., 919 E. Walnut St.
Podrecca, Guido I., Professional Bldg.
Polk, John W., 609 Cherry St.
Powell, Edwin M., Professional Bldg.
Prater, Bill G., Professional Bldg.
Pruett, Paul L., Professional Bldg.
Rainwater, E. H., Professional Bldg.
Rigney, Levi M., Woodruff Bldg.
Rosen, Max, Professional Bldg.
Russell, Earl D., 1503 S. Glenstone St.
Sala, Jose M., 1423 N. Jefferson St.
Scanlon, Robert C., 1711 Boonville St.
Schroff, Carle H., 1630 N. Jefferson St.
Schwartz, Eugene J., Professional Bldg.
Schweitzer, Fred C. Jr., Woodruff Bldg.
Sewell, Walter S., 2707 S. Marlan St.
Siceluff, Joseph G., 609 Cherry St.
Silsby, Don H., 719 S. Dollison St.
Silsby, Don J., Professional Bldg.
Silsby, Harry D., Professional Bldg.
Simpson, Albert P., 318 St. Louis St.
Simpson, Emerson L., 1630 N. Jefferson Ave.
Smith, C. Souter, 620 St. Louis St.
Snead, William H. Jr., Professional Bldg.
Stewart, Robert B., 600 S. Glenstone St.
Stewart, R. Wendell, Professional Bldg.
Stufflebam, Robert E., 2248 Mirabeau St.
Sturtevant, Harwood N., Professional Bldg.
Sundstrom, Frank D., 1211 S. Glenstone St.
Tarrasch, Ernest L., 1636 S. Glenstone St.
Taylor, William E., Southwest Missouri State College
Thomasson, David D., 600 S. Glenstone St.
Tillman, Walter W. Jr., Professional Bldg.
Tombridge, Thomas L., Professional Bldg.
Trotter, W. Yates, Professional Bldg.
Tsang, John L. K., 1636 S. Glenstone St.
Turner, Glenn O., Professional Bldg.
Vail, A. Denton, Professional Bldg.
Waddell, Kenneth E., 1211 S. Glenstone St.
Wakeman, J. Newton, 600 S. Glenstone St.
Walker, William M., Professional Bldg.
Warres, Herbert L., 2614 Englewood Road
Waterfield, Jim R., 1211 S. Glenstone St.
Webb, Leslie R. Jr., Professional Bldg.
White, R. Ned, Professional Bldg.
Williams, John W., 600 S. Glenstone St.
Williams, John W. Jr., Landers Bldg.
Wilson, Roy E., 1211 S. Glenstone St.
Wise, Gordon F., Professional Bldg.
Wittmer, Samuel C., 600 S. Glenstone St.
Wood, William W., 1211 S. Glenstone St.
Wooldridge, Wilfred E., Professional Bldg.
Yancey, Daniel L., 1211 S. Glenstone St.
Zahn, Robert L., Professional Bldg.

GRUNDY COUNTY
(Grand River Medical Society)

HARRISON COUNTY
(Grand River Medical Society)

HENRY COUNTY MEDICAL

Bradshaw, William D., Clinton
Brock, Bernard, Windsor
Hollingsworth, Ray S., Clinton
Hughes, Shelby B., Clinton
Jones, Edna M., Clinton
King, Richard H., Clinton
Smith, James O., Clinton
Smith, William J., Windsor
Thurber, Claude M., Windsor
Walker, George S., Clinton
Walker, Hugh B., Clinton
Woltzen, Simon W., Clinton

HICKORY COUNTY
(Dallas-Hickory-Polk County Medical Society)

HOLT COUNTY
(Northwest Missouri Medical Society)

HOWARD COUNTY MEDICAL SOCIETY

Bloom, William A., Fayette
Dean, Francis D., Fayette
Leech, Maurice P., Fayette
Marshall, William G., Glasgow
Shaw, William J., Fayette
Shaw, William J. Jr., Fayette
Wells, Donald E., Glasgow

HOWELL COUNTY
(South Central Counties Medical Society)

IRON COUNTY
(Mineral Area County Medical Society)

JACKSON COUNTY MEDICAL SOCIETY
(Kansas City)

Aaron, George A., 10901 Winner Road, Independence
Adelman, Arthur, 333 W. Meyer Blvd. 13
Adler, Federico, 701 E. 63rd St. 10
Agee, Loren G., 5801 E. 113th St. 34
Ahlefeld, Charles B., One Penn Valley Park 41
Aisenstadt, E. Albert, 333 W. Meyer Blvd. 13
Aks, Daniel, 751 E. 63rd St. 10
Alberg, Marvin R., One Penn Valley Park 41
Allebach, H. K., Meyer Blvd. at Prospect 32
Allen, Robert E., 4320 Wornall Road 11
Allen, William B., 4620 Nichols Parkway 12
Alsop, Webb S. Jr., 3604 W. 53rd St., Shawnee Mission, Kan.
Altomare, Edward P., 2610 E. 63rd St. 30
Altringer, Arthur N., 305 W. 43rd St. 11
Ammatelli, Francis J., 7546 Troost St. 31
Anderson, Raymond B., 4320 Wornall Road 11
Anderson, Richard W., 1001 Romany Road 13
Andrews, Berneil W., 4320 Wornall Road 11
Andrus, Bailey C., 4320 Wornall Road 11
Arms, Arnold V., 4320 Wornall Road 11
Aschman, Theodore H., Plaza Time Bldg. 12
Asher, A. Graham, Professional Bldg. 6
Atcheson, Bellefield, 11123 Locust St. 31
Atwell, Floyd C., 4620 Nichols Parkway 12
Aull, John, 6544 Summit St. 13
Averill, Keith H., 6400 Prospect Ave. 32
Bachmann, Paul L., 1212 W. Truman Road, Independence
Baer, Alvin J., 751 E. 63rd St. 10
Baker, Philip J., 11440 E. 47th St. 33
Ball, James E., 1102 E. 47th St. 10
Ballard, V. Bryce, 4320 Wornall Road 11
Bare, Chester I. Jr., 10501 E. 78th Ter. 38
Barelli, Pat A., 425 E. 63rd St. 10
Barloon, James H., 12300 S. 71 Highway, Grandview
Barnard, John L. Jr., 4312 Nichols Parkway 11
Barnes, Robert H., 6714 Kenwood Ave. 31
Barnett, Gordon P., 751 E. 63rd St. 10
Barry, Gerald W., 3601 Troost Ave. 9
Barry, William B., 4600 Nichols Parkway 12
Bass, Walter R., 10227 E. 61st St. 33
Baum, Frank E., 701 E. 63rd St. 10
Baumhardt, Edward E., 4320 Wornall Road 11
Bay, Merill R., 1808 W. Main St., Blue Springs
Becker, Richard R., 5622 Holmes St. 10
Becker, Rolfe A., 751 E. 63rd St. 10
Bell, William F., 615 W. 3rd St., Lee's Summit
Bennett, James D., 701 E. 63rd St. 10
Benoit, Hector W. Jr., 4620 Nichols Parkway 12
Berenson, Sheldon E., 4620 Nichols Parkway 12
Bergmann, Victor H., 105 Ward Parkway 12
Bernreiter, Michael, 1246 W. 63rd St. 13
Berry, Guy N., 4320 Wornall Road 11
Berry, Maxwell G., 4320 Wornall Road 11
Biggs, Harry L., 63rd & Evanston Sts. 33

Bikales, Victor W., 751 E. 63rd St. 10
Bills, Marvin L., Plaza Time Bldg. 12
Black, Don A., 6400 Prospect Ave. 32
Black, Eugene C., Professional Bldg. 6
Blim, Richard D., 4320 Wornall Road 11
Boody, Robert J., Plaza Time Bldg. 12
Bordy, Marvin D., 701 E. 63rd St. 10
Borenstine, Joseph, 7307 Holmes St. 31
Botwin, Arnold E., 701 E. 63rd St. 12
Boughnou, Harvey P., 315 Nichols Road 12
Bourke, Timothy S., 601 E. Meyer St. 31
Boutros, Amin, 3112 Linwood Blvd. 28
Bowser, John F., 411 Nichols Road 12
Boyd, George K., 5111 Independence Ave. 24
Bradford, John F., 4320 Wornall Road 11
Brams, Jack B., 751 E. 63rd St. 10
Braverman, Abe E., 701 E. 63rd St. 10
Brewster, Charlotte M., 4320 Wornall Road 11
Bridgens, James G., 2510 E. Linwood Blvd. 28
Brown, Adrian J., 12 E. 63rd St. 13
Brown, Elwyn S., 1710 Independence Ave. 6
Brown, Irwin S., Plaza Time Bldg. 12
Brown, Robert S., 4706 Broadway 12
Broyles, Glen H., 6140 Raytown Road 33
Brumm, Lawrence W., 6400 Prospect Ave. 32
Bruner, Robert E., 912 Valentine Road 11
Brust, Carl H., 6114 Howe Drive, Mission, Kan.
Bryan, William H. Jr., 3939 Prospect Ave. 30
Buckingham, William W., 3641 Locust St. 9
Buckner, Robert C., Plaza Parkway Bldg. 12
Budke, Harold A., 306 E. 12th St. 6
Buhler, Victor B., 5212 Belleview Ave. 12
Buie, Bruce R., 5801 E. 113th St. 34
Bunting, Williston P., 305 W. 43rd St. 11
Burns, Beryl I., 1510 Bass Ave., Columbia
Butcher, Robert W., 7924 Paseo Blvd. 32
Butterworth, Nelson S., 4706 Broadway 12
Byers, Philip L., 4320 Wornall Road 11
Caffrey, Raymond J., 1314 W. Red Bridge 14
Caldwell, John K., Argyle Bldg. 6
Calovich, Emery R., 4620 Nichols Parkway 12
Campbell, Frederick B., Professional Bldg. 6
Campbell, John G., Professional Bldg. 6
Carbaugh, Glenn C., 1234 Huntington Road 13
Carlson, Hjalmar E., Professional Bldg. 6
Carmichael, Francis A. Jr., 4320 Wornall Road 11
Carrier, Edson C., 315 Nichols Road 12
Caruso, Alfred A., 924 Linwood Blvd. 9
Casady, Gilbert N., 9830 Aberdeen Drive, Prairie Village, Kan.
Casebolt, Buford T., 4000 Baltimore Ave. 11
Casebolt, Milton B., 4000 Baltimore Ave. 11
Castelaw, Rush E., 3731 Locust St. 9
Cavaness, Ernest W., 1010 Neptune Drive, Encinitas, Calif.
Centner, Paul J., 2727 Main St. 8
Chambers, James Q. Jr., 4620 Nichols Parkway 12
Chandler, Robert A., 701 E. 63rd St. 10
Chapman, Arthur H., Professional Bldg. 6
Chapman, Samuel B., 6400 Prospect Ave. 32
Cheng, Alfred K., 6212 USAF Disp., Shu Linkou Air Station, APO 160, San Francisco, Calif.
Chernoff, Selbert G., 4601 Independence Ave. 24
Clark, Harold B., 6215 Agnes Ave. 30
Clark, Irving H., 5801 E. 113th St. 34
Clasen, Arthur C., 20 Island Ave., Belle Island, Fla.
Cline, Merle A., 4126 St. John Ave. 23
Coburn, Donald F., 6400 Prospect Ave. 32
Cochrane, Joseph J., 4706 Broadway 12
Cockerell, Sanford F., 11200 Winner Road, Independence
Coffey, Ralph R., Professional Bldg. 6
Coffin, Theodore A., Professional Bldg. 6
Cohen, Harry K., 751 E. 63rd St. 10
Cohen, Hilliard, 1291 W. 72nd Ter. 14
Colglazier, Mary C., 411 Nichols Road 12
Colom, George A., 4643 Wyandotte St. 12
Connell, Evan S., Commerce Bldg. 6
Cooper, Charles S., Professional Bldg. 6
Cooper, John H., Argyle Bldg. 6
Cooper, Leo Francis, 4620 Nichols Parkway 12
Cortner, Mary C., 701 E. 63rd St. 10
Counsell, Chester M., 708 W. 17th St. 8
Cowherd, Joseph B., 634 W. 69th St. Ter. 13
Cox, Kenneth E., 4320 Wornall Road 11
Crocker, Albert M., 2202 E. 31st St. 9
Crockett, James E., 4320 Wornall Road 11
Culbertson, William F., 1253 Huntington Road 13
Curran, Desmond, Federal Reserve Bank Bldg. 6
Curts, Calvin J., 4706 Broadway 12
Cutcliff, Daniel J., 415 E. 66th St. 31
Dalton, Timothy T., 751 E. 63rd St. 10
Dann, David S., 701 E. 63rd St. 10
Davis, Donald R., 4320 Wornall Road 11
Davis, Herbert V., 4620 Nichols Parkway 12
Davis, Jack M., 9406 E. 63rd St. 33
Davis, John J., 9011 Delmar Ave., Overland Park, Kan.
Davis, Kenneth A., 209 W. 47th St. 12
Davis, Robert C., 659 W. 61st Ter. 13
Decker, Albert I., 4706 Broadway 12
DeMaria, Peter F., 8125 E. Gregory Blvd. 33
DeMott, John D., 411 Nichols Road 12
DeMotte, John A., 315 Nichols Road 12
Devins, George S., 4949 Rockhill Road 10
Deweese, Everett R., Rialto Bldg. 6
Diveley, Rex L., 4312 Nichols Parkway 11
Dixon, Otto J., Professional Bldg. 6
Dixon, Vewiser L., 2204 E. 18th St. 27
Dlabal, Luke J., 1210 Ash Ave., Independence
Doane, William L., Grandview
Dodge, Mark, 4320 Wornall Road 11
Dodge, Milton, 2005 W. 71st Ter., Shawnee Mission, Kan.
Doering, Robert W., 6400 Prospect Ave. 32
Dolezal, Joseph B., Bryant Bldg. 6
Dorsch, Ervin H., 10901 Winner Road, Independence
Downey, James W., 425 E. 63rd St. 10
Drake, Roy F., Professional Bldg. 6
Draney, Thomas E., 425 E. 63rd St. 10
Drisko, Robert M., 4620 Nichols Parkway 12
Drowns, Bruce V., 4320 Wornall Road 11
Duer, Mildred C., 310 W. 47th St. 12
Duncan, Ralph E., P. O. Box 2597, 42
Duncan, William H., Professional Bldg. 6
Dunleavy, James D., 4620 Nichols Parkway 12
Durnell, Monaford D., 615 W. 3rd St., Lee's Summit
Dwyer, Frank X., 4620 Nichols Parkway 12
Dwyer, Hugh L., City Hall Bldg. 6
Eanet, Morton P., 4825 Troost Ave. 10
Edde, Clifford G., Argyle Bldg. 6
Edmonds, Devilla D., 9009 Mission Road, Leawood, Kan.
Eisemann, Gustave, 751 E. 63rd St. 10
Elam, James O., 24th & Cherry St. 8
Eldridge, Charles J., 409 E. 63rd St. 10
Elias, David J., 9306 E. New 40 Highway, Independence
Elliott, James R., 1080 Busch Garden Court, Pasadena, Calif.
Elliott, Raymond G., Bryant Bldg. 6
Elliott, Wade E., 710 W. 12th St. 5
Ellis, Elmer F., 1326 Lake Drive 8
Elser, Otto H., 10901 Winner Road, Independence
Endlich, Harold L., 6400 Prospect Ave. 32
Engel, Lawrence P., 315 Nichols Road 12
Engelking, David F., 9507 E. 63rd St. 33
Eshelman, Albert D., 9306 E. New 40 Highway, Independence
Eubank, David F., Raytown Clinic 33
Eubank, Dillard M., 9406 E. 63rd St. 33
Eubank, William R., 7546 Troost Ave. 31
Eubank, William Y., 6400 Prospect Ave. 32
Farley, Claude C., 6400 Prospect Ave. 32
Farney, Jacob P., 2721 W. 69th St., Shawnee Mission, Kan.
Farnsworth, Jesse J., 1103 Grand Ave. 6
Feierabend, Frank L., 2727 Main St. 8
Feist, George V., 1103 W. 86th Ter. 14
Ferguson, Donald S., 2012 E. 24th St. 27
Ferguson, James T., Bryant Bldg. 6
Ferris, Carl R., 6400 Prospect Ave. 32
Finkle, Robert H., 10901 Winner Road, Independence
Fitzgerald, Robert H., 10901 Winner Road, Independence
Flanders, Virgil E., Professional Bldg. 6
Flatley, John A., 9406 E. 63rd St. 33
Fleming, Royall B., 1433 E. 19th St. 8
Florian, Albert J., 1224 W. 69th Ter. 13
Folck, William P., Professional Bldg. 6
Forman, Louis H., 4320 Wornall Road 11
Forsythe, Robert W., 4320 Wornall Road 11
Fouts, Dallas B. Sr., 13101 E. 43rd St., Independence
Fowler, Fred D., 4320 Wornall Road 11
Fowler, James W., 1103 Grand Ave. 6
Franklin, Curtis U., 2701 E. 31st St. 28
Fredeen, Robert C., 411 Nichols Road 12
Frick, John P., Professional Bldg. 6
Friedman, Morris L., 701 E. 63rd St. 10
Fritzlen, Thomas J., 6848 Locust St. 31
Fuhrman, Donald L., 4320 Wornall Road 11
Fulton, Albert E., 9501 Madison Ave. 14
Fury, Tex E., 642 Huntington Road 13
Gainey, Harold L., 4320 Wornall Road 11
Ganley, William C., Argyle Bldg. 6
Gard, Raymond F., 10901 Winner Road, Independence
Garrison, Roy F., 6400 Prospect Ave. 32
Gaskins, John H., 4320 Wornall Road 11
Geha, Braham J., 7546 Troost Ave. 31
Gempel, Paul A., 315 Nichols Road 12
Gentry, Enoch N. Jr., Telephone Bldg. 6
Gibson, David M., St. Luke's Hospital 11
Gilkey, Harry M., Professional Bldg.
Ginardi, Donald E., 4643 Wyandotte St. 12
Ginsberg, Norman A., 751 E. 63rd St. 10
Gist, William W., 330 W. 47th St. 12
Glasscock, Ernest L., 411 Nichols Road 12
Goldman, Stanley L., 7546 Troost Ave. 31
Goldsich, Edward, 209 W. 47th St. 12
Goldstein, Marvin F., 751 E. 63rd St. 10
Goodman, Leroy, 751 E. 63rd St. 10
Goodson, William H. Jr., 1103 Grand Ave. 6
Goolsbee, Robert L., 6438 Sagamore St., Shawnee Mission, Kan.
Gordon, Morris P., 701 E. 63rd St. 10
Gottsch, Joseph C., 7907 Granda, Prairie Village, Kan.
Grabske, Charles F., 10901 Winner Road, Independence
Grabske, Charles F., Jr., 10901 Winner Road, Independence
Graham, James W., Argyle Bldg. 6
Graham, Wallace H., Argyle Bldg. 6
Grauerholz, James W., 4203 Mercier St. 11
Green, John R., 1107 Appleton Ave., Independence
Green, Stanley L., 10901 Winner Road, Independence
Greene, W. Wallace, 4620 Nichols Parkway 12
Gregory, Ralph W., 4620 Nichols Parkway 12
Griffith, John A. Jr., 4320 Wornall Road 11
Growdon, John A., Professional Bldg. 6
Guffey, Don C., Professional Bldg. 6
Gullett, Charles C., 1735 Baltimore Blvd. 8
Gundle, Sigmund, 751 E. 63rd St. 10
Gunn, Richard W., Professional Bldg. 6
Haggan, Margaret E., 7809 E. 55th St. N. 19
Haith, Edward E., 7633 Baltimore Ave. 14
Haight, John M., 3401 E. 12th St. 27
Haith, Walter F., 2701 E. 31st St. 28
Hall, Ralph R., St. Luke's Hospital 11
Hall, Thomas B., Professional Bldg. 6
Halperin, Phillip H., 751 E. 63rd St. 10
Hamel, Herbert A., 6306 Morningside Drive 13
Hamill, Robert W., 4320 Wornall Road 11
Hanes, Lee D., 446 W. 69th St. 13
Hanes, Robert L., 7721 State Line 14
Hardacre, Ruth A., 3300 Charlotte St. 9
Hardy, Henry M., 4620 Nichols Parkway 12
Hardy, John W., Professional Bldg. 6
Harless, Morris S., 4320 Wornall Road 11
Harned, Bert W., 2826 Main St. 8
Harris, Boyd L., 8982 Kobe Place, San Diego, Calif.
Hart, Lawrence W., 4643 Wyandotte St. 12
Hartwig, Frederick H., 6400 Prospect Ave. 32
Hartwig, Raymond W., Rialto Bldg. 6
Hash, Emalyn H., 807 W. 69th Ter. 13
Hashinger, Edward H., 7884 Lookout Drive, LaJolla, Calif.
Hausheer, Herman J., 1612 W. Truman Road, Independence
Haynes, Solon E., 2727 Main St. 8
Hazen, Robert M., 6400 Prospect Ave. 32
Heller, B. Marcus, 409 E. 63rd St. 10
Hellerstein, Stanley, 1710 Independence Ave. 6
Helman, Richard G., 7721 State Line 14
Henry, Clarke L., 4320 Wornall Road 11

Henry, Schubert D., 1115 Grand Ave. 6
Herrman, George V., 4320 Wornall Road 11
Hibbard, Blaine Z., 4320 Wornall Road 11
Hickerson, William H., 604 W. Maple St., Independence
Higgins, Robert S., 1001 W. 55th St. 13
Hill, Jack H., Trinity Lutheran Hospital 8
Hill, Jesse N., 1438 Hedges Ave., Independence
Hink, Frederick W., 10229 Independence Road, Independence
Hirsch, Joe E., 4643 Wyandotte St. 12
Hoadley, William D., 6400 Prospect Ave. 32
Hodgson, Frank H., 4301 Main St. 11
Hoeper, Samuel D., 12921 Grandview Road, Grandview
Hoffman, Jacob S., 751 E. 63rd St. 10
Hoffmann, R. Lee, Professional Bldg. 6
Hogan, Daniel F., Laguna Heights, Port Isabel, Tex.
Hogue, Frank S., 4320 Wornall Road 11
Hollweg, Kenneth C., 4320 Wornall Road 11
Holt, Waldo S., 4620 Nichols Parkway 12
Holton, Edward B., 10901 Winner Road, Independence
Hook, Waller C., 6400 Prospect Ave. 32
Hornstra, Robijn K., 2200 McCoy St. 8
Hughes, Gerald E., 6400 Prospect Ave. 32
Hungate, Carroll P., Professional Bldg. 6
Hunt, Claude J., 6400 Prospect Ave. 32
Hunt, Thomas R., 6400 Prospect Ave. 32
Hunter, Martin P., 4706 Broadway 12
Hunzicker, Warren J., 3520 Broadway 41
Hurwitt, Frank, Park East Hotel 6
Hustead, Robert F., 9510 Belinder Road, Leawood, Kan.
Hyde, Lawrence L., 4620 Nichols Parkway 12
Ingham, Walton C., 4320 Wornall Road 11
Irwig, Fred, Professional Bldg. 6
Jackson, Haywood R., 3317 E. 43rd St. 30
Jackson, William R., 1102 Grand Ave. 6
Jacob, Walter P., 701 E. 63rd St. 10
Jacobs, David S., 4949 Rockhill Road 10
Jacobs, Morton, 6314 Brookside Plaza 13
Jacobs, Walter H., 751 E. 63rd St. 10
Jaime, Nicholas, 1820 W. 38th St. 11
James, Otis E., Jr., 6306 Morningside Drive 13
Jansen, Robert, 101 E. 63rd St. 13
Jarvis, James A., 600 W. 57th St. 13
Jeffries, Robert C., 6315 Brookside Plaza 13
Jenab, Morteza, 751 E. 63rd St. 10
Jennett, J. Harvey, Professional Bldg. 6
Johnson, C. Laurence, Professional Bldg. 6
Johnson, James S., 2202 E. 18th St. 27
Johnson, Joseph E., 5801 E. 113th St. 34
Johnson, Morris B., 1102 130th St., Grandview
Johnson, Thomas M., 4320 Wornall Road 11
Johnson, William A., 2200 Prospect Ave. 27
Johnstone, Paul N., Bryant Bldg. 6
Jonas, Harry S. Jr., 11711 Markham Road, Independence
Jones, George H., 1435 E. 78th St. 31
Jones, T. Reid, 411 Nichols Road 12
Justus, John B., Plaza Parkway Bldg. 12
Kanarek, Joseph, 751 E. 63rd St. 10
Kantor, Julius M., 701 E. 63rd St. 10
Kantor, Samuel, 751 E. 63rd St. 10
Kartus, Irving, 6155 Oak St. 13
Katz, Milton, 4620 Nichols Parkway 12
Kaufmann, Herbert H., 701 E. 63rd St. 10
Kaul, Philip G., 4320 Wornall Road 11
Keairnes, Harold W., 3800 S. Woodland Ave., Independence
Kealhofer, George C., 6627 Prospect Ave. 32
Keeler, James E., 4620 Nichols Parkway 12
Kelly, Eugene H., The Baptist Home, Ironton
Keltner, Raymond O., 5111 Skyline Drive, Shawnee Mission, Kan.
Kendall, Charles A., 10901 Winner Road, Independence
Kennard, George K., 4320 Wornall Road 11
Kent, Bela K., 701 E. 63rd St. 10
Kent, Clifford F., Professional Bldg. 6
Ketcham, William M., 4706 Broadway 12
Ketterman, Grace H., 9231 Belinder Road, Shawnee Mission, Kan.
Ketterman, Herbert L., 9231 Belinder Road, Shawnee Mission, Kan.
Kettner, Edward G., Professional Bldg. 6
Kienberger, Paul A., 10605 E. 35th Ter., Independence
Kiene, Richard H., 4312 Nichols Parkway 11
Kimball, Merritt H., 610 E. 36th St. 9
King, J. Tenbrook, 4320 Wornall Road 11
King, Walter R., Professional Bldg. 6
Kingsbury, Helen, 6415 Sagamore Road, Shawnee Mission, Kan.
Kiser, David M., 920 W. 47th St. 12
Kitchen, William M., 425 E. 63rd St. 10
Klein, Edward H., Plaza Medical Bldg. 12
Klepinger, Dayton P., 826 Warwick Court, Neosho
Knight, John S., 305 W. 43rd St. 11
Knight, Lyle B., 615 W. 3rd St., Lee's Summit
Knoch, H. Kermit, Plaza Parkway Bldg. 12
Koehler, Charles A., Argyle Bldg. 6
Korth, William M., Professional Bldg. 6
Kovac, Albert P., Argyle Bldg. 6
Kraft, Jacob, 701 E. 63rd St. 10
Kranson, Seymour J., 11200 Winner Road, Independence
Kuhn, William F. II, 6247 Brookside Plaza 13
Kyger, Fred B., 637 W. 67th Ter. 13
Kyger, John E., 751 E. 63rd St. 10
Kyner, Thomas A., Wirthman Bldg. 9
Laffoon, France L., 869 Alta Vista Drive N., Vista, Calif.
Lally, James J., 906 Grand Ave. 6
Lamar, Robert F., Professional Bldg. 6
Lambert, L. Marian, 10928 Hillcrest Road 34
Lambie, Rodger W., 701 E. 63rd St. 10
Landis, George K., Professional Bldg. 6
Lapi, Angelo, 2012 Stratford Road, Shawnee Mission, Kan.
Lapp, Harry C., 751 E. 63rd St. 10
Latham, Raymond W., 4620 Nichols Parkway 12
Lauer, Daniel J., 4320 Wornall Road 11
Laurenzana, Frank P., 428 S. White Ave. 23
Layton, Ira C., 6400 Prospect Ave. 32
Lee, George C., P. O. Box 1065, 41
Lee, Henry A., 7546 Troost St. 31
Lehner, Richard L., Professional Bldg. 6
Leifer, William W., 701 E. 63rd St. 10
Leitch, Cecil G., 808 S. 15th St., Blue Springs
Leitch, David A., 24th & Cherry St. 8
Leitz, Frank B., Professional Bldg. 6
Lentz, Clark H., One Penn Valley Park 41
Leo, William A., 6400 Prospect Ave. 32
Levey, Harry B., 701 E. 63rd St. 10
Lewis, Revis C., Professional Bldg. 6
Lichtor, Alexander, 751 E. 63rd St. 10
Lichtor, Joseph M., 751 E. 63rd St. 10
Lieberman, B. Albert Jr., 4620 Nichols Parkway 12
Lilly, Terry E. Sr., 306 E. 12th St. 6
Lilly, Terry E. Jr., 306 E. 12th St. 6
Lindquist, Carl N., 106 W 14th St. 5
Link, Vance E., 1201 W. 36th St., Independence
Linville, Howard E., 4620 Nichols Parkway 12
Lloyd, Ivan E., 1816 Rankin St., Independence
Lohrentz, Lois H., 2800 W. 50th Ter., Shawnee Mission, Kan.
Long, R. Stacy, 6400 Prospect Ave. 32
Lowell, Paul, 4742 Liberty St. 12
Lowrey, Ford J., Rialto Bldg. 6
Lundgren, Fred H. Jr., 4706 Broadway 11
Lyddon, Harold F. Jr., 75th & Troost Sts. 31
Lytton, George J., 411 Nichols Road 12
McCalla, John P., Blue Ridge Professional Bldg. 33
McCanse, Andrew, 4320 Wornall Road 11
McCarthy, William F., 140 Lake Topawingo, Blue Springs
McClanahan, Robert C., Professional Bldg. 6
McConchie, James E., 10901 Winner Road, Independence
McCoy, Frederick J., 701 E. 63rd St. 10
McCubbin, Clarence R., 4550 Warwick St. 11
McCullough, Campbell C., Argyle Bldg. 6
McCunniff, William B., Argyle Bldg. 6
McDonald, Bruce P., 2604 Prospect Ave. 27
McDonald, Victor G. Jr., Plaza Time Bldg. 12
McDonnell, John F., 4320 Wornall Road 11
McFarland, M. Donald, 4320 Wornall Road 11
McFarland, H. Richard, 4320 Wornall Road 11
McGannon, Paul T., 920 W. 47th St. 12
McGuire, Thomas H., 429 W. 58th St. 13
McIntyre, John D., 4516 Cambridge Court 10
McKee, Joseph W., 4320 Wornall Road 11
McKee, Wallace P., 4320 Wornall Road 11
McKnelly, William V. Jr., 4801 E. Linwood Blvd. 28
McLeod, John, 116 W. 47th St. 12
McMillan, Thomas E., 6400 Prospect Ave. 32
McNutt, Theodore L., 5801 E. 113th St. 34
McPhee, William R., 2800 Hospital Drive 16
McVay, James R., V. F. W. Bldg. 11
McVay, James R. Jr., V.F.W. Bldg. 11
MacInnis, Florence E., 4620 Nichols Parkway 12
Maclean, John A., P. O. Box 258, Baldwin City, Kan.
MacNaughton, Ralph E., St. Joseph's Hospital 28
MacNaughton, Robert A., 3208 W. 101st St., Leawood, Kan.
Mangels, Kenneth A., 1212 W. Truman Road, Independence
Mantell, Harriet B., 634 W. 67th Ter. 13
Marks, Mark M., 701 E. 63rd St. 10
Marsh, Alice, Pleasant Hill
Marshall, Cameron F., Plaza Theatre Bldg. 12
Masucci, Joseph M., Argyle Bldg. 6
Mathewson, Hugh S., 4620 Nichols Parkway 12
May, James W., 425 E. 63rd St. 10
Mayer, John H. Jr., Plaza Parkway Bldg. 12
Melgaard, S. Ross, 1012 W. 61st Ter. 13
Meriwether, Don R., 4620 Nichols Parkway 12
Meyer, Paul W., 4312 Nichols Parkway 12
Meyers, Harold L., 1901 Brookwood St., Mission, Kan.
Miles, George O., 4320 Wornall Road 11
Miller, Clint L., 615 W. 3rd St., Lee's Summit
Miller, Gerald L., 4706 Broadway 12
Miller, Max I., 4001 W. 63rd St., Prairie Village, Kan.
Miller, Wilson H., 4620 Nichols Parkway 12
Mitchell, Andrew D., 4320 Wornall Road 11
Mitchell, Robert H., Bryant Bldg. 6
Mitra, Nirmal K., 5300 Rosewood St., Mission, Kan.
Mixson, William C., 4320 Wornall Road 11
Moe, William W., 2625 W. Paseo Blvd. 8
Montello, Samuel A., 4620 Nichols Parkway 12
Montgomery, James G., 6400 Prospect Ave. 32
Mooney, Justin L., Bryant Bldg. 6
Mooney, Marcel L., 751 E. 63rd St. 10
Moore, Robert A., Box 679, 41
Morest, F. Stanley, 501 N.E. 13th Ave., Hollywood, Fla.
Morgan, David B., 4620 Nichols Parkway 12
Morris, Joseph H. Jr., 10901 Winner Road, Independence
Morris, William R., 9507 E. 63rd St. 33
Morrison, Donald H., 2510 Linwood Blvd. 28
Moss, Paul, 4706 Broadway 12
Mosser, Robert S., 3114 Norten St., Independence
Mount, Allan, 9820 Cambridge Ave. 34
Mueller, Martin J., 6400 Prospect Ave. 32
Mullen, Leo M., 4443 Paseo Blvd. 10
Multhauf, Cyril J., 5629 W. 50th St., Mission, Kan.
Mundy, William L., 4635 Wyandotte St. 12
Murphy, James J., 7546 Troost Ave. 10
Murphy, Robert J., 4320 Wornall Road 11
Myers, John S., Shukert Bldg. 6
Myers, Robert M., Rialto Bldg. 6
Myers, Wilson A., 425 Huntington Road 13
Naime, Mansour J., 425 E. 63rd St. 10
Needels, Orval T., 7400 Wornall Road 14
Nelson, Bentley A., 305 W. 43rd St. 11
Nesselrode, John H., 10901 Winner Road, Independence
Newman, Robert L., 7721 State Line 14
Nickson, Charles E. Jr., 10901 Winner Road, Independence

Nicolay, Kenneth S., 4320 Wornall Road 11
Nigro, Dominic M., 207 E. 51st Ter. 12
Nigro, E. Robert, 1047 W. 53rd Ter. 12
Nigro, Joseph A., 1055 W. 55th St. 13
Noltensmeyer, Milton N., 3305 W. 50th Ter., Shawnee Mission, Kan.
Nunn, Pat M., 1401 Southwest Blvd., Kansas City, Kan.
Ogilvie, John H., Box 157, R. 1, Gravois Mills
O'Hearne, John J., 4643 Wyandotte St. 12
O'Malley, James F., 4706 Broadway 12
O'Neil, James H., 425 E. 63rd St. 10
Ost, Mark D., 16 W. 115th St. 15
Overesch, Harry B., 6400 Prospect Ave. 32
Owens, Graham J., 152 Mezzanine, Union Station 8
Owens, Hugh H., 152 W. Mezzanine, Union Station 8
Owens, Richard L., 9228 E. Highway 50, 33
Owens, Robert H., 4706 Broadway 12
Owre, Alfred Jr., 2200 McCoy St. 8
Ozar, Milton B., 701 E. 63rd St. 10
Padfield, Earl G. Jr., Plaza Broadway Bldg. 12
Pakula, Sidney F., 751 E. 63rd St. 10
Pallett, Harold A., 4620 Nichols Parkway 12
Parelman, Allen G., 701 E. 63rd St. 10
Parker, Elmer L., 3027 Campbell St. 9
Parker, Hubert M., Argyle Bldg. 6
Parsons, Eugene O., 315 Nichols Road 12
Passman, Harold, 701 E. 63rd St. 10
Pearson, Paul E., Rialto Bldg. 6
Peete, Don C., Professional Bldg. 6
Penner, Stanley, 751 E. 63rd St. 10
Perll, Maurice F., 830 W. 61st Ter. 13
Perll, Rita D., 830 W. 61st Ter. 13
Perry, Ralph, 6400 Prospect Ave. 32
Peters, Evelyn L., Menorah Medical Center 10
Petersen, A. Gene, 7721 State Line 14
Peterson, Carl M., 2701 E. 31st St. 28
Peterson, George L., 4806 W. 68th St., Shawnee Mission, Kan.
Peterson, Milton C., 751 E. 63rd St. 10
Peterson, Walter R., 2701 E. 31st St. 28
Petry, Ezra L., 701 E. 63rd St. 10
Pfuetze, Edwin L., Plaza Parkway Bldg. 12
Pickard, Nicholas S., 6210 High Drive, Shawnee Mission, Kan.
Pickens, Edgar E., 4826 Roanoke Parkway 12
Pierron, John B., 6516 Linden Road 13
Pinsker, Oscar T., 751 E. 63rd St. 10
Piper, Donald K., Professional Bldg. 6
Pipkin, Garrett F., Argyle Bldg. 6
Pittam, Radford F., 418 Hyde Park, Hutchinson, Kan.
Polk, George M., 12112 E. 52nd Ter. 33
Pollock, Leo H., 751 E. 63rd St. 10
Pope, Charles H. Jr., 1509 W. Truman Road, Independence
Porter, Louis, 751 E. 63rd St. 10
Poser, Charles M., 616 W. Meyer Blvd. 13
Potter, Lee G., Professional Bldg. 6
Potts, Donald A., 1612 W. Truman Road, Independence
Powers, John M., 3304 Linwood Blvd. 28
Prentiss, Harry S., 6832 Sni-A-Bar Road 29
Preston, Albert Jr., 4320 Wornall Road 11
Printz, Joseph H., 701 E. 63rd St. 10
Printz, Otto J., 701 E. 63rd St. 10
Pucci, Gregory L., 411 Nichols Road 12
Pugh, Richard G., 1612 W. Truman Road, Independence
Quer, Erich A., 6400 Prospect Ave. 32
Quistgard, Paul C., 6741 Prospect Ave. 32
Rader, Ada B., 13414 Locust St., R. R. 31, 45
Raich, Robert A., 4320 Wornall Road 11
Ramey, Ehret O., 4635 Wyandotte St. 12
Ramos, John F. Jr., 2849 Indiana Ave. 28
Rannie, Paul R., 709 S. Fuller St., Independence
Rector, Joe L. Jr., 44th & Nichols Parkway 11
Reinhardt, George R., 6400 Prospect Ave. 32
Reister, Philip D., Argyle Bldg. 6
Reitz Carl H., 7329 Broadway 14
Remley, George C., Argyle Bldg. 6
Reynolds, Clarence C., 4615 E. 43rd Ter. 30
Rhoades, Arthur B., Professional Bldg. 6
Richardson, Marion W., 2526 Prospect Ave. 27
Richert, Robert C., 504 W. 96th St. 14
Riley, Joseph P. Jr., General Hospital 8
Riller, Lowell E., Professional Bldg. 6
Roberts, Grosvenor G., 701 E. 63rd St. 10
Roberts, Harold M., Professional Bldg. 6
Roberts, Sam E., Professional Bldg. 6
Robinson, Arthur W., 4320 Wornall Road 11
Robinson, E. Kip, Professional Bldg. 6
Robinson, G. Wilse Jr., 2625 Paseo Blvd. 8
Robinson, William J., 9931 Lee Circle, Leawood, Kan.
Robison, James T. Jr., 4620 Nichols Parkway 12
Rodgers, George H., 10041 El Monte Lane, Overland Park, Kan.
Rodgers, Samuel U., 2701 E. 31st St. 28
Rogers, Robert L., 751 E. 63rd St. 10
Rose, Charles W., 334 St. VanBrunt St. 24
Rubin, Sidney, 1287 W. 72nd St. 14
Rubnitz, Leon H., 751 E. 63rd St. 10
Rufe, John R., Bryant Bldg. 6
Russell, James L., 4320 Wornall Road 11
Russell, Richard L., 205 E. 63rd St. 13
Russell, Robert K., 63rd & Evanston Sts., Raytown
Saferstein, A. Lester, 751 E. 63rd St. 10
Saladino, Anthony, Argyle Bldg. 6
Samuelson, Edward A., 4620 Nichols Parkway 12
Sanders, Donald C., 2625 W. Paseo Blvd. 8
Sanders, Harmon U. Jr., 2246 Rhode Island St., Lawrence, Kan.
Sanders, William F., 411 Nichols Road 12
Santoro, Carlos G., 3309 W. 63rd St., Shawnee Mission, Kan.
Saper, Philip, 3 E. 3rd St., Lee's Summit
Sasano, Joseph R. Jr., 1710 Independence Ave. 6
Sauer, Gordon C., 6400 Prospect Ave. 32
Saunders, Everett L., 121 W. Lexington St., Independence
Scarpellino, Louis A., 44th & Nichols Parkway 11
Schaerrer, William C., 4320 Wornall Road 11
Schiffmacher, Jack E., Professional Bldg. 6
Schillie, Gene A., 6400 Prospect Ave. 32
Schorer, Edwin H., 221 W. 48th St. 12
Schottman, Gerhard W. Jr., 44th & Nichols Parkway 11
Schutz, Carl B., 320 W. 47th St. 12
Schutz, Richard B., Plaza Time Bldg., 12
Seely, Clark W., 4320 Wornall Road 11
Sewell, Minor F., 1722 W. 39th St. 11
Shackleford, Elbert C., 9406 E. 63rd St. 33
Shapiro, Lazare M., 701 E. 63rd St. 10
Sheahon, John A., 9406 E. 63rd St. 33
Shecter, Nathan, 701 E. 63rd St. 10
Shelden, Russell D., 751 E. 63rd St. 10
Sheldon, John, 6305 Brookside Plaza 13
Shifrin, Alexander, 6824 Holmes St. 31
Shireman, Kenneth L., 4606 St. John Ave. 23
Shires, Edward B., 10312 Cherokee Lane, Leawood, Kan.
Shockley, Clarence J., 5927 McGee St. 13
Shofstall, Charles K., 310 W. 47th St. 12
Shuey, Herbert H., 3903 Brooklyn Ave. 30
Shypper, Moses J., 751 E. 63rd St. 10
Siegel, Irving, 215 Volker Road 12
Simon, Sanford, 8129 Rosewood St., Shawnee Mission, Kan.
Sinclair, Alexander B., 920 W. 47th St. 12
Singleton, John M. III, 4320 Wornall Road 11
Skillman, Robert K., 4320 Wornall Road 11
Skinner, John T., Bryant Bldg. 6
Slentz, Edwin L., 4320 Wornall Road 11
Slentz, William A., 4320 Wornall Road 11
Slickman, R. A., 7721 State Line 14
Smith, Arthur B., 6400 Prospect Ave. 32
Smith, Dale C., 4320 Wornall Road 11
Smith, Edwin I., 1710 Independence Ave. 6
Smith, H. Eugene, 411 Nichols Road 12
Smith, Ira T., 6400 Prospect Ave. 32
Smith, Katherine W., 801 W. 58th Ter. 13
Smith, O. D., 6300 Woodson St., Mission, Kan.
Smith, Wallace B., 10901 Winner Road, Independence
Smull, Ned W., 2318 W. 70th Ter., Shawnee Mission, Kan.
Sneid, Philip, 701 E. 63rd St. 10
Snider, Samuel H., 722 Ward Parkway 21
Snider, Wilbur R., 10901 Winner Road, Independence
Spafford, Allen L., 315 Nichols Road 12
Spalding, Wilber B. Jr., 1102 Grand Ave. 6
Spurny, Otto M., 425 E. 63rd St. 10
Stacey, Wallace R., 10901 Winner Road, Independence
Staggs, William A., Argyle Bldg. 6
Staley, Harry R., Bryant Bldg. 6
Starke, Helen (Sister Paula Theresa), Queen of the World Hospital 27
Statland, Harry, 751 E. 63rd St. 10
Statland, Morris, 751 E. 63rd St. 10
Steffen, Lawrence F., Professional Bldg. 6
Stegman, Elmer G., 6137 Blue Ridge Blvd., Raytown
Stein, Joseph W., 1103 Grand Ave. 6
Stelle, Charles W., Bendix Corp., Box 1159 41
Stelmach, Walter J., 7949 State Line 14
Stockton, Raymond W., 4320 Wornall Road 11
Stockwell, A. Lloyd, Professional Bldg. 6
Stone, Raymond F., 7949 State Line 14
Stotts, Charles S., 8221 Nall Ave., Prairie Village, Kan.
Stratemeier, Edward H., 31st & Wyandotte Sts. 8
Strauss, Carl F., 751 E. 63rd St. 10
Stribling, Thomas L., 10901 Winner Road, Independence
Summers, Caldwell B., Plaza Theatre Bldg. 12
Sutton, Richard L. Jr., 411 Nichols Road 12
Swisher, Robert C., 425 E. 63rd St. 10
Switzer, Clyde, 8100 W. 54th Ter., Merriam, Kan.
Szabados, Ernest D., 1612 W. Truman Road, Independence
Tarson, Solomon S., 837 W. Gregory St. 14
Tasker, Charles B., 31st & Wyandotte St. 8
Teall, Raymond E., 650 W. 56th St. 13
Teare, Max E., 11201 Walnut St. 14
Terrill, Robert S., 4643 Wyandotte St. 12
Tesson, James A., Rialto Bldg. 6
Theel, Otto W. Jr., 4301 Main St. 11
Thiele, George H., 411 Nichols Road 12
Thomas, Christopher Y., 4320 Wornall Road 11
Thompson, Charles L., 4320 Wornall Road 11
Thorn, Druery R., 8200 Ensley Lane, Leawood, Kan.
Threlkeld, William L. Jr., 3501 Brook Road, Richmond, Va.
Tice, Wayne K., 1509 W. Truman Road, Independence
Trippe, Harrison C., 8511 Lee Blvd., Shawnee Mission, Kan.
Trowbridge, Barnard C., 415 E. 63rd St. 10
Trowbridge, Ellsworth H., 5317 W. 72nd St., Prairie Village, Kan.
Trowbridge, Ellsworth H. Jr., 411 Nichols Road 12
Trulove, Laurance A., 1222 McGee St. 6
Turner, Percy C., 2846 Myrtle St. 28
Tutera, Dominic F., Plaza Medical Bldg. 12
Tuthill, Herbert, 1037 W. 71st Ter. 14
Twin, Edward J., 701 E. 63rd St. 10
Twyman, Richard A., 4320 Wornall Road 11
Underwood, Dick H., Bryant Bldg. 6
Underwood, Harry A., 5100 E. 24th St. 27
Underwood, Johnson Jr., Professional Bldg. 6
Underwood, Ross H., Bryant Bldg. 6
Unger, Harold, 701 E. 63rd St. 10
Upsher, Albert E., Argyle Bldg. 6
VanBiber, James T., 1612 W. Truman Road, Independence
VanBuskirk, Terrance E., 5246 St. John Ave. 23
VanBuskirk, William C., 4620 Nichols Parkway 12
Vaughn, James W., Neurological Hospital 8
Vilmer, Charles, Professional Bldg. 6
Vincent, Jack C., 701 E. 63rd St. 10
Virden, Herbert H., 7546 Troost Ave. 31
Voth, Harold W., 4320 Wornall Road 11
Wade, Frederick E., Professional Bldg. 6
Wagner, Paul J., 2826 Main St. 8
Wakefield, Franklin H., 1102 Grand Ave. 6
Walker, James C., 2727 Main St. 8
Walker, John W., 6400 Prospect Ave. 32
Walker, Orville C. Jr., 1210 S. Ash St., Independence
Wall, Harry C., 751 E. 63rd St. 10
Wall, Leonard A., 4320 Wornall Road 11
Ward, Robert L., 4126 St. John St. 23
Watson, Ethel, First National Bank Bldg., Independence
Waxman, David, 4840 Prospect Ave. 30
Waxman, Jane Z., 4840 Prospect Ave. 30
Weakley, David R., 411 Nichols Road 12

Webb, Harry E., 330 W. 47th St. 12
Webster, Joseph G., Plaza Parkway Bldg. 12
Weiford, Edward C., 4320 Wornall Road 11
Welker, Joseph E., 6441 Summit St. 13
Wells, John H., 3325 Prospect Ave. 28
Weltscheff, Christo A., 1800 Blue Ridge Ext. 46
Wheeler, Charles B., 820 W. 57th St. 13
Wheeler, John H., 4320 Wornall Road 11
White, Charles H., 6518 Overhill Road, Prairie Village, Kan.
White, George A., 3416 Paseo Blvd. 9
White, James S., 2812 Highland Ave. 9
White, Stoughton F., 4320 Wornall Road 11
White, William E., Argyle Bldg. 6
Whiteman, John R., 6314 Brookside Plaza 13
Whitman, Doyle C., Sharp Bldg. 6
Whitemore, J. Stewart, 1039 W. 58th St. 13
Whittaker, Charles K., 627 E. 69th St. 31
Wien, Irving A., 1103 Grand Ave. 6
Wilhelm, Warren F., 6400 Prospect Ave. 32
Wilkinson, Charles B., 4604 Benton Blvd. 30
Wilkinson, Everett A., 6400 Prospect Ave. 32
Williams, Frank R., 4320 Wornall Road 11
Williams, George P., 6105 Fairland Drive 34
Williams, Joseph C. Jr., 6400 Prospect Ave. 32
Williams, Luke E., 2201 E. 27th St. 27
Williams, Robert A., 3701 Broadway 11
Williams, Roland D., 305 W. 43rd St. 11
Williams, Starks J., 5600 Agnes Ave. 30
Williams, Vincent T., Argyle Bldg. 6
Williamson, George L., Professional Bldg. 6
Willits, Lyle G., Professional Bldg. 6
Willoughby, Jean B., 6400 Prospect Ave. 32
Wilson, Clifford C., Plaza Time Bldg. 12
Wilson, Hester J., Plaza Time Bldg. 12
Winer, Herbert J., 751 E. 63rd St. 10
Winkelman, Esther B., 7449 Broadway 14
Winston, Bernard H., 751 E. 63rd St. 10
Wise, George W., 4620 Nichols Parkway 12
Withers, Orval R., Plaza Parkway Bldg. 12
Wolf, Jack W., 425 E. 63rd St. 10
Wolff, Dolores J., Richards-Gebaur AFB
Woods, Harold V., 808 S. 15th St., Blue Springs
Woods, S. Dwight, 4320 Wornall Road 11
Woods, Walton C., Medical Dept., TWA Midcontinent Airport 8
Woodward, William W., 10901 Winner Road, Independence
Workman, Charles E., Professional Bldg. 6
Wortmann, Robert F., 6400 Prospect Ave. 32
Wright, R. Paul, Professional Bldg. 6
Wu, William Q., 63rd & Holmes St. 10
Wurster, W. Joel, 305 W. 43rd St. 11
Yohe, Ruth M., 1710 Independence Ave. 6
Youll, Donald V., 409 E. 63rd St. 10
Young, James E., 4320 Wornall Road 11
Young, Jesse W., 1401 Southwest Blvd., Kansas City 3, Kan.
Young, Paul R., 7424 Gregory Circle 33
Zellermayer, Jacob, 701 E. 63rd St. 10
Ziegler, Allen M., 804 S. Market St., Holden
Ziegler, Dewey K., 415 E. 63rd St. 10
Zuber, Harold V., 6400 Prospect Ave. 32

JASPER COUNTY MEDICAL SOCIETY
(Joplin)

Allen, David O., 2525 S. Jackson St.
Barnett, Norman H., 25th & Jackson Sts.
Birsner, Frank H., 1717 River St., Carthage
Burch, John E., Medical Arts Bldg.
Carnes, Victor M., Medical Arts Bldg.
Chase, Ned B. Jr., 3125 Virginia St.
Chesney, George W., 25th & Jackson Sts.
Cohle, Richard R., 116 W. 3rd St., Carthage
Craig, Irwin T., 25th & Jackson Sts.
Crawford, Archie L., Frisco Bldg.
Crispell, Lawrence S., 6th & Pearl Sts.
DeTar, Burleigh E., 410 Jackson St.
DeTar, B. E. Jr., 410 Jackson St.
Douglass, Jesse E., 3560 Broadway, Kansas City
Eliscu, Juliette M., 2002 Jackson St.
Ferguson, Lewis H. Jr., Medical Arts Bldg.
Ferguson, Ralph L., Medical Arts Bldg.
Ferguson, Robert M., 110 N. Webb St., Webb City
Fritsch, Andrew J., 2920 Pearl St.
Graves, F. Burton, 114 W. 32nd St.
Grubb, Paul H., 2509 Jackson St.
Hall, Marvin F., Medical Arts Bldg.
Hamilton, Eugene H., Medical Arts Bldg.
Holtzman, Samuel, Medical Arts Bldg.
Hornback, Edward R., Frisco Bldg.
Hurst, Wilfred W., Medical Arts Bldg.
Isbell, Charles H., Carthage
Jeans, Virgil, Medical Arts Bldg.
Kiehl, Katharine, Miners Bank Bldg.
Kirschman, Robert E., 2529 Jackson St.
Koehler, John W., Medical Arts Bldg.
Kuhn, John R. Jr., Frisco Bldg.
Laney, Ronald L., 3140 Ocean St., Carlsbad, Calif.
Longenecker, Joe L., 2503 Jackson St.
McIntire, Emery J., 201 W. 3rd St., Carthage
McNew, William T., Carthage
McPike, Lloyd H., Frisco Bldg.
Mack, Mary L., Address Unknown
Maddox, John D., 6th & Pearl Sts.
O'Brien, James A., 545 N. 6th St., Muskogee, Okla.
Paddock, Charles S., Medical Arts Bldg.
Papp, Sandor D., Medical Arts Bldg.
Patterson, Donald R., 2509 Jackson St.
Patterson, Grover S., 510 S. Main St., Carthage
Pence, F. Wendell, 612 S. Main St., Carthage
Poor, Carl W., Box 302, Neosho
Post, Winfred L., 617 Joplin St.
Powell, Robert G., 2329 Jackson St.
Royce, James J., Sarcoxie
Schoebrel, Cletus B., Medical Arts Bldg.
Schulte, Gregory A., 2125 Jackson St.
Scorse, Sidney W., 2509 Jackson St.
Smith, Roland T., Medical Arts Bldg.
Smith, William R., 211 E. Chestnut St., Carthage
Walker, Paul W., Medical Arts Bldg.
Webster, Roger W., 863 Cherry Way, Hayward, Calif.
Wetzel, Fred S. Jr., 1515 Hazel St., Carthage
Whitten, M. Foster, 616 W. Centennial St., Carthage
Wieman, Harry K., Medical Arts Bldg.
Wilcox, Ruth E., 114 W. 32nd St.
Wilson, Alice H., 1923 Sergeant St.
Wood, George H., 1515 Hazel St., Carthage
Wooldridge, Bart F., Medical Arts Bldg.
Young, Calvin C. Jr., Medical Arts Bldg.

JEFFERSON COUNTY MEDICAL SOCIETY

Allbee, Roger H., Crystal City
Bolgar, Bertalan, Festus
Commerford, James J., Crystal City
Donnell, Harold E., DeSoto
Donnell, Robert H., Crystal City
Donnell, Thomas A., DeSoto
Edwards, Waldo B., 135 W. Adams St., Kirkwood
Fal'et, Charles E., DeSoto
Judge, Walter T., Crystal City
Kozal, Francis L., Crystal City
McKinstry, Karl V., DeSoto
Mayfield, James L., Crystal City
Reich, Oliver F., Kimmswick
Rice, Carl E., Hillsboro
Rutledge, John F., Festus
Senn, Emmett J., Herculaneum
Yeskit, Harry, Festus

JOHNSON COUNTY MEDICAL SOCIETY

Cooper, R. Lee, Warrensburg
Damron, Oscar H., Warrensburg
Folkner, A. L., Warrensburg
Frein, Donald E., Leeton
Gonzalez, M. Garza, Warrensburg
Grove, Gulph W., Knobnoster
Harkness, Harry, Warrensburg
Johnson, Charles S., Warrensburg
Jones, Keith D., Warrensburg
Lederer, Charles M., Warrensburg
Maxson, T. Reed, Warrensburg
Rawlins, Kelly, Holden

KNOX COUNTY
(North Central Counties Medical Society)

LACLEDE COUNTY
(Mid-Missouri County Medical Society)

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

Best, Robert, Higginsville
Boydston, Catherine, Odessa
Boydston, W. Wayne, Odessa
Brady, Hugh S., Concordia
Brasher, Ben H., Lexington
Cook, Thomas B., Richmond
Cope, Joseph S., Lexington
Crozier, Franklin A., Richmond
Davault, George K., Richmond
Fulkerson, Wilbur E., Higginsville
Goldberg, Isadore E., Braymer
Kelling, Douglas G., Waverly
Kelling, Jordan, Waverly
Koppenbrink, Walter E. Jr., Higginsville
LaHue, William C., Lexington
Liston, Odus, Oak Grove
McFadden, Gene A., Waverly
Martin, Wilfred E., Odessa
Riley, Charles T., Richmond
Ward, Joe, Lexington
Williams, John W., Oak Grove

LAWRENCE COUNTY
(Ozarks Medical Society)

LEWIS-CLARK SCOTLAND COUNTIES MEDICAL SOCIETY

Davis, Landis Y., Canton
Gilfillan, Earl E., Memphis

LINCOLN-ST. CHARLES COUNTY MEDICAL SOCIETY
(St. Charles)

Barnette, Eugene, 207 N. 5th St.
Berry, Paul T., Troy
Canty, Eugene J., 114 N. Main St.
Clever, Henry W. Jr., 114 N. Main St.
Commerford, John F., 114 N. Main St.
Creech, Joseph C., Troy
Crider, Russell J., 222 S. 2nd St.
Damron, Edward O., Elsberry
Duling, Gerald J., 207 N. 5th St.
DuMontier, R. J., O'Fallon
Fleming, Robert J., 120 Clay St.
Goldkamp, John D., 207 N. 5th St.
Hammes, Romar E., 207 N. 5th St.
Hetlage, Louis P., Troy
Kamada, Tsutomu, 117 Clay St.
Keller, Robert M., Wentzville
Kister, George E., 302 S. 2nd St.
Muenster, Vincent P., 4th & Clay Sts.
Neubeiser, Ben L., 206 Washington St.
Olin, Robert H., 125 Clay St.
Poggemeier, William H. Jr., 302 S. 2nd St.
Randall, Don Q., 220 S. 6th St.
Ridzon, Thomas J., 625 Lammert Court
Roter, Alexander M., 338 N. Main St.
Rother, Paul H., 114 N. Main St.
Schneider, Thomas A., 27 St. Henry Court
Scokel, Paul W. III, 207 N. 5th St.
Smoller, Martin B., 207 N. 5th St.
Towers, Orville W., 114 N. Main St.
Wipfler, Earl J. Jr., 143 Cardinal Lane
Yaeger, Gerald A., 1916 Sibley St.

LINN COUNTY
(Grand River Medical Society)

LIVINGSTON COUNTY
(Grand River Medical Society)

McDONALD COUNTY
(Ozarks Medical Society)

MACON COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

MADISON COUNTY
(Mineral Area County Medical Society)

MARIES COUNTY
(Mid-Missouri County Medical Society)

MARION-RALLS-SHELBY COUNTY MEDICAL SOCIETY
(Hannibal)

Archer, Perry C., Shelbyville
Bach, Lysle M., 1737 Harrison Hill
Birney, William P., 213 S. 5th St.
Burns, Francis R., 711 Grand Ave.

Canella, John M., 707 Broadway
Clisham, John F., B & L Bldg.
Fischer, Thomas J., 2910 St. Mary's St.
Foreman, Phillip B., 711 Grand Ave.
Francka, W. F., 603 Country Club Drive
Glascock, Donald W., Palmyra
Grant, Albert J., 115 N. 5th St.
Greene, Harry L., Holmes Bldg.
Hamlin, Wyeth, 711 Grand Ave.
Johnson, Charles R., U.S.N.H. No. 926, FPO, San Francisco, Calif.
Landau, Daniel B., 711 Grand Ave.
Lanning, Robert J., 115 N. 5th St.
Latimer, Walter N. A., B & L Bldg.
Lichty, Charles A., Shelbina
Lucke, Eugene M., Court House
Mann, James K., Hannibal Clinic
Murphy, Bernard L., 2000 Crescent Drive
Plowman, Edward M., B & L Bldg.
Purcell, P. L., Smithville
Rapp, Earl L., 711 Grand Ave.
Roller, Merrill J., 2910 St. Mary's St.
Steele, James C. Jr., 711 Grand Ave.
Strong, Richard M., 711 Grand Ave.
Sweets, Henry H., Jr., 1003 Broadway
Walterscheid, John H., 1209 Broadway
Well, Julius W., Palmyra

MERCER COUNTY
(Grand River Medical Society)

MID-MISSOURI COUNTY MEDICAL SOCIETY
(Phelps-Crawford-Dent-Pulaski-Maries-Laclede Counties)

Bass, B. J., Salem
Baumann, Albert R., Steelville
Butts, James D., Rolla
Carrington, Howard W., Lebanon
Casey, Shederic A., Lebanon
Crosby, Alice S., Salem
Drake, Avery A., Rolla
Elders, Frank A. Jr., Cuba
Feind, Earl E., Rolla
Fisher, George E., Lebanon
Froelich, Rae W., Lebanon
Garrison, T. W., Camdenton
Hammler, Christiana V., St. James
Hart, Martin M., Salem
Holley, Donald B., Camdenton
Hope, James L., Lebanon
Hunt, Lloyd H., Salem
Hurst, Ben B., Lebanon
Jenkins, Paul A., Lebanon
Lytle, William R., Rolla
Miller, Clyde S., Waynesville
Mitchell, Roy E., Salem
Myers, James M., Rolla
Riffel, Gordon W., Bourbon
Russell, Barbara E., Rolla
Stricker, Emil A., St. James
Summers, Jacob H., Lebanon
Underwood, Millard K., Rolla
Young, Robert B., Rolla

MILLER COUNTY MEDICAL SOCIETY

Buehler, Carl T. Jr., Eldon
Shelton, Edward O., Eldon

MINERAL AREA COUNTY MEDICAL SOCIETY
(St. Francois-Iron-Madison-Washington-Reynolds Counties)

Appleberry, Charles H., Rivermines
Brennan, John A., Farmington
Bugg, Andrew F., 312 E. 3rd St., Lordsberg, N. M.
Bull, Ben M., Ironton
Burcham, Tom R. Jr., Farmington
Carleton, Charles E. Jr., Farmington
Chastain, Charles W., Farmington
Cresswell, George F., Potosi
Crouch, F. Richard, Farmington
Dennis, W. Paul, Flat River
Farrar, Charles B., 719 N. Middle St., Cape Girardeau
Ford, William, Farmington
Foster, Jack L., Desloge
Frain, Marie M., State Hospital No. 4, Farmington
Gaebe, Harold C., Desloge
Gaskins, Charles W., Fredericktown
Gay, George, Ironton
Grossman, Marvin, Fredericktown
Harland, Robert E., Ironton
Haw, Marvin T. Jr., Bonne Terre
Hoctor, Emmett F., Farmington
Huckstep, Robert A., Farmington
Hunt, John W. Jr., Leadwood
Karraker, Alvan G., Farmington
Menne, Marvin C., Ironton
Michaelis, Charles E., Fredericktown
Mullen, Jack, Bonne Terre
Oliver, George A., Farmington
Osborn, Retus W. III, Farmington
Patton, William G., Ironton
Slaughter, Shelby C., Fredericktown
Taylor, Van W., Bonne Terre
Warren, T. Thomas, Potosi
Watkins, George L. Jr., Farmington

MISSISSIPPI COUNTY
(SEMO County Medical Society)

MONITEAU COUNTY MEDICAL SOCIETY

Fulks, Richard B., California
Gallagher, Lionel M., California
Kibbe, Edgar A., California
Latham, Kenyon S., California

MONROE COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

MONTGOMERY COUNTY MEDICAL SOCIETY

Andersen, Elmer J. T., Montgomery City
Byland, Samuel J., Wellsville
Helm, James O., New Florence
Hirsch, Albert, Vandalia

MORGAN COUNTY MEDICAL SOCIETY

Gunn, Jack, Versailles
Kauffman, Ruth, Versailles
Lyle, Robert R., Versailles
Washburn, J. Loren, Versailles

NEW MADRID COUNTY
(SEMO County Medical Society)

NEWTON COUNTY
(Ozarks Medical Society)

NORTH CENTRAL COUNTIES MEDICAL SOCIETY
(Adair-Schuyler-Knox-Sullivan-Putnam Counties)

Cramb, Arthur B., 711 C. E. Orange St., Lakewood, Fla.
English, Milton T. Jr., Kirksville
Freeman, Spencer L., Kirksville
Grim, Edward M., Kirksville
Hasselblad, Oliver W., 297 Park Ave. S., New York 11, N. Y.
Hilton, Paul E., Kirksville
Isom, Waldo B., Knox City
Jones, John B., Kirksville
Stickler, Ralph O., Kirksville
Sullivan, William J., V. A. Hospital, Providence 8, R. I.
Tarvydas, Francis, Edina
Wimp, J. J., Kirksville

NORTHWEST MISSOURI MEDICAL SOCIETY
(Nodaway-Holt-Atchison-Gentry-Worth Counties)

Bare, Edward F., Tarkio
Bauman, Henry C., Maryville
Blacklock, David E., King City
Byland, Benjamin F., Maryville
Carlin, Albert L., Stanberry
Carpenter, Wallace, Rock Port
Cossins, Carlos E., State Hospital No. 2, St. Joseph
Dunshee, Robert E., Maryville
Humphrey, James, Mound City
Imes, Elvin D., Maryville
Jackson, William R., Maryville
Matteson, Frank B., Grant City
Morgan, Troy O. Jr., Albany
Niedermeyer, Edward L., Tarkio
Parsons, Bernie, Albany
Perry, David C., Mound City
Wanamaker, John M., Rock Port
Wempe, G. Raymond, Maryville

OREGON COUNTY
(South Central Counties Medical Society)

OSAGE COUNTY
(Unorganized)

OZARK COUNTY
(South Central Counties Medical Society)

OZARKS MEDICAL SOCIETY
(Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald Counties)

Alsup, Frederick F., Belen, N. M.
Anderson, Paul B., Neosho
Aubin, Francis W., Branson
Bailey, Alan B., Mount Vernon
Blankenship, George W., Neosho
Bowman, Melvin C., Neosho
Brasher, Charles A., Mount Vernon
Brown, Frederick B., Aurora
Burney, Wallace S., Miller
Capetti, Alex P., Crane
Carter, James R., Neosho
Coffman, Esther E. L., 1514 13th N., Lakeworth, Fla.
Cohnberg, Rosellen E., Neosho
Cowan, R. D., Aurora
Donley, Robert R., Monett
Edwards, Francis L., Monett
Evans, Harry T., Branson
Gardner, Joseph W., Reeds Springs
Gillespie, Roy, Branson
Glass, William J. Jr., Monett
Glover, Kenneth, Mount Vernon
Graves, Arthur J., Mount Vernon
Hamilton, William P., Aurora
Hellweg, Charles E., Mount Vernon
Kelsey, Kenneth L., Aurora
Kenney, Roy E., Neosho
Kerr, Frank T., Monett
Langeluttig, Harry V., Mount Vernon
Lentz, Harold C., Neosho
McCallum, A. J. C., Aurora
Magness, William C., Branson
Mars, Hartley F., Forsyth
Marty, Loraine A., Pierce City
Morrison, T. A., Aurora
Newman, Mary J. N., Cassville
Olive, George C., Neosho
Price, Charles H., Cassville
Reynolds, James R., Neosho
Rogers, Donald B., 1115 S. 36th St., Omaha 5, Neb.
Roper, Stanley D., Ozark
Schultz, Loraine E., Branson
Shumate, L. St. Clair, Reeds Spring
Spears, Charles A., Branson
Sweany, Henry C., Mount Vernon
Taylor, Leo T., Neosho
Threadgill, Jesse M., Forsyth
Whitehead, Frank F., Neosho
Wilson, Daniel R., Mount Vernon
Wommack, Fred L., Crane
Yates, J. Lewis, Mount Vernon

PEMISCOT COUNTY MEDICAL SOCIETY

Aquino, Philip J., Caruthersville
Bernard, J. W., Caruthersville
Bryant, William O., Hayti
Cain, Charles F., Caruthersville
Caldwell, Jacob D., Hayti
Chapman, J. R., Steele
Cook, O. W., Caruthersville
Cooper, Lawrence E., 1274 Hanton St., Fort Myers, Fla.
Grable, James, Portageville
Gubin, Alan S., Caruthersville
Hensley, Daniel R., Lilbourn
Limbaugh, Walter R., Hayti
McCoy, Warren R., Caruthersville
McKaskle, Clarence W., Caruthersville
Painter, Andrew E., Portageville
Painter, Lattie B. Jr., Portageville
Shirey, Arnold G., Hayti
Smith, Robert S., 114 Sylvester St., Webster Groves
Strittmatter, James C., Caruthersville

PERRY-STE. GENEVIEVE COUNTIES MEDICAL SOCIETY

Carron, Oscar A., Perryville
DeGenova, Gerard H., Ste. Genevieve
Fairchild, James F., Perryville
Feltz, Lawrence W., Perryville
Fischer, Theodore, Altenburg

Lanning, Richard C., Ste. Genevieve
Legner, Stanley G., Perryville
Lutkewitte, Joseph F., Ste. Genevieve
McDermott, Alfred E., Perryville
Miller, Oliver J., 1972 Bend Road, Cape Girardeau
Utterman, William F., Perryville

PETTIS COUNTY MEDICAL SOCIETY
(Sedalia)

Beckemeyer, William A., 500 W. 16th St.
Bess, William E., 210 S. Ohio St.
Boger, James W., 500 W. 16th St.
Brady, Charles H., Gordon Bldg.
Braverman, Elliott M., 1806 W. 11th St.
Brazos, John C., Smithton
Campbell, A. J., 312 S. Ohio St.
Carlisle, John B., 1019 W. 6th St.
Daum, Harold F., Bothwell Memorial Hospital
Dyer, David P., 2511 Stephenson St.
Edwards, D. R., 700 Limit Ave.
Ewert, John O., 412 S. Ohio St.
Fisher, Stanley D., Sedalia
Gonser, Karl B., 101 S. Ohio St.
Hopkins, Thomas J., 700 S. Limit Ave.
Hopkins, T. Spencer, 1609 S. Limit Ave.
Lamy, John E., 509 W. Broadway
Long, Frank B., 723 W. 7th St.
Lowe, Alvin L., 1425 S. Grand Ave.
Maddox, Albert R., 116 W. Main St.,
Osborne, Charles D., 710 W. Broadway
Owings, Raymond H., Bothwell Memorial Hospital
Proctor, Donald C., 700 S. Limit Ave.
Rhodes, Euhlan L., Warsaw
Roberts, Paul A., Sweet Springs
Rodeman, John M., Gordon Bldg.
Siegel, Carl D., 1216 W. 18th St.
Stauffacher, C. Gordon, 700 Limit Ave.
Stewart, Robert H., Bothwell Memorial Hospital
Walter, Archie L., 500 W. 16th St.
Worley, Charles A., Sweet Springs

PHELPS COUNTY
(Mid-Missouri County Medical Society)

PIKE COUNTY MEDICAL SOCIETY

Andrae, Robert L., Louisiana
Christensen, Roger F., Louisiana
Jackson, Edward K., Clarksville
Lewellen, Charles H., Louisiana
Martin, W. Joe, Louisiana
Middleton, John W., Louisiana
Scott, Clive D., Louisiana
Stuerman, Lawrence G., Louisiana
Wilcoxen, William B., Bowling Green

PLATTE COUNTY MEDICAL SOCIETY

Allen, S. Lloyd, 3505 Eastwood Lane, Kansas City
Kimball, I. W., Parkville
Lewis, Albert G., Platte City
Parker, H. Graham, Platte City
Robinson, John A., Edgerton
Thurman, Hill C., Parkville

POLK COUNTY
(Dallas-Hickory-Polk County Medical Society)

PULASKI COUNTY
(Mid-Missouri County Medical Society)

PUTNAM COUNTY
(North Central Counties Medical Society)

RALLS COUNTY
(Marion-Ralls-Shelby County Medical Society)

RANDOLPH COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

RAY COUNTY
(Lafayette-Ray County Medical Society)

REYNOLDS COUNTY
(Mineral Area County Medical Society)

RIPLEY COUNTY
(Butler-Wayne-Ripley County Medical Society)

ST. CHARLES COUNTY
(Lincoln-St. Charles County Medical Society)

ST. CLAIR COUNTY
(West Central Missouri Medical Society)

ST. FRANCOIS COUNTY
(Mineral Area County Medical Society)

STE. GENEVIEVE COUNTY
(Perry-Ste. Genevieve Counties Medical Society)

ST. LOUIS MEDICAL SOCIETY
(St. Louis)

Abel, Charles C., 4511 Forest Park Blvd. 8
Abel, Oliver III, 4511 Forest Park Blvd. 8
Abell, Walter E., 2253 S. 29th St. 10
Abrams, Morris, 4919 Forest Park Blvd. 8
Acker, Harry L., 6150 Oakland Ave. 10
Ackerman, Lauren V., 600 S. Kingshighway Blvd. 10
Adler, Benard C., 4511 Forest Park Blvd. 8
Agress, Harry, 634 N. Grand Blvd. 3
Ahern, Archibald M., 3915 Watson Road 9
Ahlering, George H., 950 Francis Place 5
Aitken, Louis F., 3720 Washington Blvd. 8
Albrecht, Franklin H., 275 Union Blvd. 8
Alden, Arthur M., 906 Olive St. 1
Aldrich, James T., 2621 Franklin Ave. 6
Alexander, Harry L., 52 Maryland Plaza 8
Allen, Henry C., Clayton Medical Bldg. 5
Allen, Hollis N., 634 N. Grand Blvd. 3
Allen, Melvin A., 3701 Grandel Square 8
Allen, Willard M., 630 S. Kingshighway Blvd. 10
Allen, William E. Jr., 720 N. Sarah St. 8
Altheide, J. Paul, 607 N. Grand Blvd. 3
Alvis, Bennett Y., 100 N. Euclid Ave. 8
Alvis, Edmund B., 100 N. Euclid Ave. 8
Anstey, George, 4660 Maryland Ave. 8
Apicella, Frank V., 3310 Willow St., Omaha, Nebr.
Arneson, Axel N., 457 N. Kingshighway Blvd. 8
Arney, William G., 16 Hampton Village Plaza 9
Aronberg, Lawrence M., 2120 S. Warson Road 24
Auer, Arthur I., 667 Langton St. 5
Auer, Edward T., 9 Clayton Ter. 31
Aufderheide, G. Russell, 2326 Noll Drive 36
Austin, Martin G., 40 Villa Coublay 31
Aylward, Howard J., 410 Dielman Road 32
Azuma, Nobutaka, 3901 Tholozan Ave. 16
Azzouni, J. N., 8460 Watson Road 19
Babka, Joseph J., 6400 Bancroft Ave. 9
Backer, Matthias H. Jr., 3923 Watson Road 9
Baggot, Michael G., 3010 Nameoki Road, Granite City, Ill.
Bailey, Drennan, 6356 Clayton Road 17
Bailey, Frank A., 3654 S. Grand Blvd. 18
Balazs, Karl J., 3623 Cleveland Ave. 10
Ball, Thomas J. Jr., 268 S. Washington St., Bergenfield, N. J.
Bandle, Donald F., 3801 January Ave. 9
Banet, Samuel R., 7301 St. Charles Rock Road 33
Banton, M. Roman, 2917 St. Louis Ave. 6
Banton, William C., 2917 St. Louis Ave. 6
Barden, Frank W., 41 Beaver Drive 41
Bardenheier, J. Phil, 6400 Morganford Road 16
Barrett, Scott R., 5086 Easton Ave. 13
Bartels, Leo G., 906 Olive St. 1
Bartlett, Robert W., 100 N. Euclid Ave. 8
Bartlett, Willard Jr., 634 N. Grand Blvd. 3
Bartnick, Mitchel L., 7615 S. Broadway 16
Bassett, Robert B., 5427 Delmar Blvd. 12
Bauer, John D., Northland Medical Bldg. 36
Bauer, Maria, 1935 Edison Ave., Granite City, Ill.
Bauer, Otto, 1935 Edison Ave., Granite City, Ill.
Baumann, William B., 5535 Delmar Blvd. 12
Baumgarten, Walter Jr., 3720 Washington Blvd. 8
Bawell, Malcolm B., 4660 Maryland Ave. 8
Beard, Daniel D., 1431 Claytonia Ter. 17
Beare, J. Byron, 3720 Washington Blvd. 8
Beato, David L., 4149 Cleveland Ave. 10
Becke, William G., 3720 Washington Blvd. 8
Becker, Bernard, 640 S. Kingshighway Blvd. 10
Becker, Edward J., 906 Olive St. 1
Becker, George H., 4500 Olive St. 8
Becker, Stanley C., 8110 Roxburgh Drive 24
Beckette, Edmund S., 950 Francis Place 5
Beckman, Donald E., 4205 Virginia Ave. 11
Behrens, Donald T., 6 Thorndell Drive 17
Behrens, Gerald L., 3 Colonial Court 24
Beidle, Raymond J., 9440 Midland Ave. 14
Belew, Joe E., APO 178, New York, N. Y.
Bell, Robert M., 3720 Washington Blvd. 8
Benage, Clarence M., 8604 White Ave. 17
Benincasa, Anthony V., 3400 N. Kingshighway Blvd. 15
Benjamin, Durand, 7430 Virginia Ave. 11
Benjamin, Richard D., 5618 Rosa Ave. 9
Berard, Louis N., 812 Olive St. 1
Berg, Leonard, 52 Maryland Plaza 8
Berg, Ralph, 3203 S. Grand Blvd. 18
Bergman, Hugo F., 3720 Washington Blvd. 8
Bergner, Grace E., 114 N. Taylor Ave. 8
Berland, Harry I., 812 Olive St. 1
Berman, Joseph P., 1225 N. Grand Blvd. 6
Berman, William, 4919 Forest Park Blvd. 8
Bernard, Harvey R., 4960 Audubon Ave. 10
Berry, John W., 950 Francis Place 5
Bersche, Bertram L., 7575 Parkdale Ave. 5
Bettonville, Paul J. Jr., 6331 Pershing Ave. 30
Bilsky, Nathan, 4511 Forest Park Blvd. 8
Bindbeutel, Arthur H., 5203 Chippewa St. 9
Bindbeutel, Donald A., 630 Westborough Place 19
Binder, Morton A., 4652 Maryland Ave. 8
Bircher, John L., 3932 Federer Place 16
Birsner, Louis J., 634 N. Grand Blvd. 3
Bisno, Daniel, 8000 Bonhomme Road 5
Blades, Ross D., 1325 S. Grand Blvd. 4
Blair, Vilray P. Jr., 9 Stoney Brook Lane 24
Blalock, William N., 114 N. Taylor Ave. 8
Bleyer, Adrien S., 205 S. Elm Ave. 19
Block, Arnold S., 4919 Buckingham Court 8
Bock, Lux H., 1504 S. Grand Blvd. 4
Bockelman, Clifford H., 2615 Brentwood Blvd. 17
Boedeker, Roy V., 100 N. Euclid Ave. 8
Boemer, Lilburn C., 3720 Washington Blvd. 8
Boggs, Roy E., 1515 Lafayette Ave. 4
Bohne, William R., 4500 Olive St. 8
Bohrer, Harry C., 607 N. Grand Blvd. 3
Boldizer, Albert G., 3720 Washington Blvd. 8
Boldt, Thomas H., Northland Medical Bldg. 36
Bolton, Robert L., 10247 W. National St., Milwaukee, Wisc.
Bond, Leslie F., 5801 Easton Ave. 12
Bondurant, Bryce H., 134 Frontenac Forest 31
Bonfanti, Albert L., 3225 Longfellow Blvd. 4
Boswell, John R., 12918 Topping Estates 31
Boucher, Robert E., 5907 Suson Place 39
Bouhasin, John D., 138 N. Meramec Ave. 5
Boveri, Joseph C., 16 Hampton Village Plaza 9
Bowdern, Edward H., 2 Berkshire Lane 17
Bowen, Stephen F. Jr., 16 Hampton Village Plaza 9
Bowerman, Harold H., 607 N. Grand Blvd. 3
Bowersox, Warren A., 214 N. First St., Pacific
Bowles, G. Robert, 634 E. Adams Ave. 22
Bowles, William T., 7608 Maryland Ave. 5
Boyd, Arthur M., 1703 S. Grand Blvd. 4
Bradley, Frank R., 600 S. Kingshighway Blvd. 10
Bradley, Richard V., 110 S. Central Ave. 5
Bremser, Harry L., 1105 Tower Grove Ave. 10
Brennan, George A., 3654 S. Grand Blvd. 18
Brennan, Robert A., 3654 S. Grand Blvd. 18
Brennan, Robert V., 111 N. Taylor Ave. 22
Brereton, Robert L., 206 N. Clay St. 35
Bricker, Eugene M., 100 N. Euclid Ave. 8
Brielmaier, Charles R., 6211 San Bonita Ave. 5
Brodeur, Armand E., 141 Horseshoe Drive 22
Bronson, Shael S., 100 N. Euclid Ave. 8
Brookes, Henry S. Jr., 37 Algonquinwood Place 22
Brookes, Robert D., 4652 Maryland Ave. 8

Brooks, Arthur C., 60 Kingsbury Place 12
Broun, Goronwy O., 1325 S. Grand Blvd. 4
Broun, Goronwy O. Jr., 6359 Waterman Ave. 5
Brown, E. Eugene, 379 N. Taylor Ave. 8
Brown, James B., 100 N. Euclid Ave. 8
Brown, James L., 5400 Arsenal St. 39
Brown, Seymour, 2 Ricardo Lane 24
Bruce, Helen L., 3263 Hawthorne Blvd. 4
Bruns, Kenneth, 6318 Washington Blvd. 30
Bryan, James H., 950 Francis Place 5
Bryan, William T. K., 950 Francis Place 5
Budd, John J. Jr., 9313 Manchester Road 19
Bugg, George W., 2601 N. Whittier Ave. 13
Bulger, Harold A., 4405 West Pine Blvd. 8
Burford, Cyrus E., 812 Olive St. 1
Burke, Robert J., 6379 Devonshire Ave. 9
Burkhart, Edward F., 634 N. Grand Blvd. 3
Burmeister, R. William, 9308 Buxton Drive 26
Burns, Francis J., 4660 Maryland Ave. 8
Burst, Donald O., 6500 Chippewa St. 9
Busch, Anthony K., 16 Hampton Village Plaza 9
Butcher, Harvey R. Jr., 4960 Audubon Ave. 10
Byars, Louis T., 100 N. Euclid Ave. 8
Byrne, John E., 4660 Maryland Ave. 8
Byrne, Paul A., 4211 Bayless Ave. 23
Caciolo, Carlo, 1325 S. Grand Blvd. 4
Cadice, John B., 8835 McNulty Drive 14
Calkins, Delevan, 8505 Delmar Blvd. 24
Callahan, Joseph D., 7227 St. Andrews Road 21
Calodney, Martin M., 7247 Delmar Blvd. 5
Camel, H. Marvin, 310 Tanglewood Drive 24
Campbell, Cecil S., 812 Olive St. 1
Campos, Francisco J., 100 N. Euclid Ave. 8
Canaan, Samuel A. Jr., 6829 Clayton Ave. 10
Cannon, Edward M., 607 N. Grand Blvd. 3
Cappel, Powel B., 3284 Ivanhoe St. 39
Caravelli, Anthony F., Downey, Ill.
Carlin, M. Richard, 100 N. Euclid Ave. 8
Carney, Roscoe P., 1515 Lafayette Ave. 4
Carr, Archie D., 3720 Washington Blvd. 8
Carroll, George A., 3720 Washington Blvd. 8
Carroll, Grayson, 3720 Washington Blvd. 8
Carter, John F., 15 Friese Drive 32
Cary, John M., 3720 Washington Blvd. 8
Cason, Elbert H., 4401 Hampton Ave. 9
Cassel, Melvin A., 3400 N. Kingshighway Blvd. 15
Catanzaro, Anthony F., 2705 Clifton Ave. 39
Catanzaro, Francis J., 6212 McPherson Ave. 30
Chamness, James T., 3 Town & Country Drive 24
Charles, Benjamin H., 3720 Washington Blvd. 8
Charles, Cecil M., 110 S. Central Ave. 5
Charnas, Raymond M., 607 N. Grand Blvd. 3
Cherre, Anthony J., 950 Francis Place 5
Cherre, Charles J., 10 Haddington Court 5
Chieffi, Margaret, 3720 Washington Blvd. 8
Ciapciak, Stanley J., 1502 St. Louis Ave. 6
Cibis, Paul A., 4511 Forest Park Blvd. 8
Clark, Clarence L., 705 Questover Lane 41
Claseman, Wilma W., 1320 Market St. 3
Cleary, Frank, 1935 Park Ave. 4
Cleveland, Horace F., 1325 Somerset Place, Long Beach 7, Calif.
Clithero, William H., 1763 Royal Oaks Drive, Duarte, Calif.
Cloyd, Mason D., 2715 Union Blvd. 13
Coben, Lawrence A., 640 S. Kingshighway Blvd. 10
Coffin, Ernest L., 145 Vassar Drive, Lake Worth, Fla.
Cohen, Benjamin H., 138 N. Meramec Ave. 5
Cohen, Louis, 950 Francis Place 5
Cole, William R., 1401 Lawnwood Drive 23
Collodi, George A., 20 Southcote Drive 17
Comens, Phillip, 6500 Chippewa St. 9
Comens, Ruth C., 8715 Gayle Ave. 26
Conrad, Adolph H. Jr., 3720 Washington Blvd. 8
Conrad, Marshall B., 41 N. Central Ave. 5
Cook, Jerome E., 4409 West Pine Blvd. 8
Cook, Ralph L., 44 Nolan Drive 22
Cooper, Henry T., 818 Olive St. 1
Cooper, Theodore, 934 Coffey Drive 26
Cooper, Thomas J., 138 N. Meramec Ave. 5
Copher, Glover H., 600 S. Kingshighway Blvd. 10
Copp, Ralph Jr., 3720 Washington Blvd. 8
Cordonnier, Justin, 4960 Audubon Ave. 10
Correnti, Nicholas A., 100 N. Euclid Ave. 8
Costa, Dominic V., 16 Hampton Village Plaza 9
Costello, Cyril J., 100 N. Euclid Ave. 8
Costello, Joseph P. Jr., 57 Berkshire Ave. 17
Costen, William S., 20 Berkley Lane 24
Coughlin, Bertrand D., 634 N. Grand Blvd. 3
Cox, Mary E., 4500 West Pine Blvd. 8
Coxe, William S., 600 S. Kingshighway Blvd. 10
Crego, Clarence H. Jr., 35 N. Central Ave. 5
Criscione, James R., 4273 Flora Place 10
Crossman, Robert W., 1509 Holly Drive 19
Crotty, John P., 3244 January Ave. 39
Crowell, Hugh C., 9764 Tesson Ferry Road 23
Cummings, James H., 424 N. Euclid Ave. 8
Cutler, Harold M., 150 N. Meramec Ave. 5
Czebrinski, Edward W., 3701 Grandel Square 8
Daake, John W., 48 Portland Place 8
Dabbs, LeRoy, 1420 N. Taylor Ave. 13
Dahms, Gustave, 1452 S. Grand Blvd. 4
Dalton, Arthur R., 4500 Olive St. 8
Daman, George A., 6500 Chippewa St. 9
Dames, Richard J., 15 York Drive 17
Danis, Peter G., 150 N. Meramec Ave. 5
Dankner, Arnold, 150 N. Meramec Ave. 5
Dash, Udaya N., 6500 Chippewa St. 9
Davidson, John D., 600 Union Blvd. 8
Davie, Joseph, 4615 Lindell Blvd. 8
Davis, Frank L., 6123 Westminster Place 12
Davis, Martin W., 539 N. Grand Blvd. 3
Deakin, Rogers, 607 N. Grand Blvd. 3
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Dempsey, Kenneth J., 2431 N. 49th St., Milwaukee, Wis.
Denk, Alan F., 8537 Bryan St. 17
DePaoli, Frank J. Jr., Fruit St., Boston, Mass.
Devine, John B., 85 Willmore Road 9
Devine, Joyce E., 7107 Washington Blvd. 30
Dewald, Paul A., 4524 Forest Park Blvd. 8
Dewein, Edward G., West Point, N. Y.
Dickerson, Omar B., 4616 Lindell Blvd. 8
Diehr, Alvin H., 634 N. Grand Blvd. 3
Diemer, Peter A., 710 Wingan Lane 25
DiLeo, Senatro W., Northland Medical Bldg. 36
Dillard, Burl M., 600 S. Kingshighway 10
Dymtryk, Eugene T., 607 N. Grand Blvd. 3
Dodd, Robert B., 600 S. Kingshighway Blvd. 10
Dolan, John T. Jr., 619 Villa Gardens Drive 22
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Donaldson, Robert C., 915 N. Grand Blvd. 6
Donati, Robert M., 5335 Botanical Ave. 10
Donovan, William T., 10420 Willowdale Drive 41
Dorsett, E. Lee, Seymour Drive, Indianola, Miss.
Doyle, Charles R., 634 N. Grand Blvd. 3
Drace, Charles C., 3702 Gravois Ave. 16
Drace, Charles C. Jr., 19 E. Lockwood Ave. 19
Drake, Truman G., 114 N. Taylor Ave. 8
Drake, William L. Jr., 307 S. Euclid Ave. 10
Drennan, James A., 1433 Cedar St., San Leandro, Calif.
Drews, Robert C., 508 N. Grand Blvd. 3
Drey, Norman W., 634 N. Grand Blvd. 3
Dreyer, Carl J., 45 Glen Road 19
Dubuque, Theodore J. Jr., 634 N. Grand Blvd. 3
Duden, Charles W., 3720 Washington Blvd. 8
Duemler, John H., Gladden
Duemler, Robert H., 11431 Gravois Ave. 26
Duffy, Francis G., 7615 Carondelet Ave. 5
Dunn, Robert E., 7201 Hampton Ave. 9
Dworkin, Saul, 1657 S. Grand Blvd. 4
Dyer, Dallas J., 3915 Watson Road 9
Eades, Dee W., 7602 S. Broadway 11
Eagleton, Mark D., 950 Francis Place 5
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Eberle, John P., 7 Glenhaven Drive 22
Eberle, Vincent L., 4952 Maryland Ave. 8
Echterhoff, Harry R., 310 Honeysuckle Lane 19
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Eckert, Clarence T., 457 N. Kingshighway Blvd. 8
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Edele, Eugene H., 4971 Chippewa St. 9
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Egan, Thomas F., 4065 Germania Ave. 16
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Eigel, Edwin G., 3438 S. Grand Blvd. 18
Eimer, Charles E., 3863 West Pine Blvd. 8
Ellersieck, Dorothy M., 10695 Bellefontaine Road 15
Engman, Martin F. Jr., 3720 Washington Blvd. 8
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Erlanger, Joseph, 5127 Waterman Blvd. 8
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Ernst, Edwin C. Jr., 3720 Washington Blvd. 8
Ernst, Richard E., 3720 Washington Blvd. 8
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Esslinger, Arthur T., 457 N. Kingshighway Blvd. 8
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Fink, LeRoy L., 634 N. Grand Blvd. 3
Finn, Murray E., 906 Olive St. 1
Finnegan, Joseph V., 634 N. Grand Blvd. 3
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Fish, Virgil O., 2500 Town & Country Lane 31
FitzGerald, Leo P., 6677 Delmar Blvd. 5
Fitzgerald, William T., 3915 Watson Road 9
Flance, Israel J., 4652 Maryland Ave. 8
Flanigan, George D. Jr., 2601 Whittier Ave. 13
Flavan, David B., 539 N. Grand Blvd. 3
Fleishman, Alfred, 8631 Delmar Blvd. 24
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Fox, Robert E., 4161 Lindell Blvd. 8
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Freund, Samuel J., 4409 West Pine Blvd. 8
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Friedman, Paul L., 7712 Cornell Ave. 30
Friedrich, Ernst R., 600 S. Kingshighway Blvd. 10
Fries, Armand D., 812 Olive St. 1
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Friskel, Arthur K., 7422 Devonshire Ave. 19
Fryer, Minot P., 100 N. Euclid Ave. 8
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Furla, Gus J., 57 Broadview Drive 5
Furlow, Leonard T., 3720 Washington Blvd. 8
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Gagliardo, Joseph, 4209 Santen Drive 23
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Gandlmayr, Jack M., 3400 N. Kingshighway Blvd. 15
Gansloser, Wilbert M., 950 Francis Place 5
Gantner, George E. Jr., 1325 S. Grand Blvd. 4
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Garfinkel, Bernard T., 4511 Forest Park Blvd. 8
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Geisler, Gerald F., 1325 S. Grand Blvd. 4
Gentsch, Kenneth W., 601 Angenette St. 22
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Gildea, Margaret C. L., 4500 W. Pine Blvd. 8
Gilden, Jerome J., 4919 Forest Park Blvd. 8
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Gilpin, Doris C., 6908 Millbrook Blvd. 30
Gissy, Charles J., 508 N. Grand Blvd. 3
Gladney, John H., 4903 Easton Ave. 13
Glaser, Martin J., 506 Olive St. 1
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Glassberg, Bertrand Y., 1001 N. McKnight Road 32
Glennon, William P., 607 N. Grand Blvd. 3
Glick, Harry N., 6500 Chippewa St. 9
Gnade, Albert J., 3606 Gravois Ave. 16
Goebel, Joan M., 5128 Jamieson Ave. 9
Goell, Robert S., 5027 Westminster Place 8
Goettman, William I., 925 Coffey Drive 26
Goldenberg, Sidney, 4409 W. Pine Blvd. 8
Goldenson, Max J., 508 N. Grand Blvd. 3
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Goldman, Alfred, 8631 Delmar Blvd. 24
Goldman, Arnold M., 8631 Delmar Blvd. 24
Goldman, Melvin L., 634 N. Grand Blvd. 3
Goldring, Sidney, 600 S. Kingshighway Blvd. 10
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Goldstein, Marcy A., 6943 Columbia Place 30
Gomez, Cesar A. Jr., 3654 S. Grand Blvd. 18
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Grant, Neville, 114 N. Taylor Ave. 8
Grant, Samuel B., 114 N. Taylor Ave. 8
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Herman, Morris, 3701 Grandel Square 8
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Herrick, Harold C., LaGrange
Hertle, Ronald C., 1040 Childress Ave. 10
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Hofstatter, Lilli, 10695 Bellefontaine Road 37
Hagan, John R., 3931 Jamieson Ave. 9
Hogan, Patrick C., 2623 Telegraph Road 25
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Hosto, Leland E., 4909 Lindenwood Ave. 9
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Huber, Erwin T., 111 S. Meramec Ave. 5
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Kaplan, Albert, 4385 Maryland Ave. 8
Kappesser, Netajean B., 55 Fair Oaks 30
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Karandjeff, Apostle D., 634 N. Grand Blvd. 3
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Kieffer, Victor B. Jr., 100 N. Euclid Ave. 8
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Klinge, Frederick W., 6500 Chippewa St. 9
Klippel, Bernhardt W., 6500 Chippewa St. 9
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Kloecker, Robert P., 9616 Lackland Road 14
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Kromer, Charles, 7301 Raleigh Drive 23
Kubitschek, Paul E., 5385 Waterman Ave. 12
Kuebrich, Thomas C., 111 Church Road 35
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Stutsman, Albert C., 3720 Washington Blvd. 8
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Sugg, Winfred L., 2001 Westfield Court 43
Sullivan, Clement J., 4161 Lindell Blvd. 8
Sullivan, William W., 424 Hill Drive 22
Summers, John B., 16 Hampton Village Plaza 9
Summers, Thomas F., 3624 S. Broadway 18
Sunderman, Raymond C., 4943 Natural Bridge Road 15
Sunshine, Herbert, 6342 San Bonita Ave. 5
Susanka, William D., 9438 Gravois Ave. 23
Susman, Noah, 4511 Forest Park Blvd. 8
Swarm, Richard L., P. O. Box 5853, Bethesda, Md.
Sweet, Herbert C., 3 St. James Court 19
Swope, Joseph A., 432 Woodlawn St. 19
Talbott, Hudson, 405 Winton Lane, Louisville, Ky.
Tanaka, George M., 59 Grasso Place 23
Tapper, Stephen M., 3654 S. Grand Blvd. 18
Tate, Lloyd L., 901 Washington Blvd. 1
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Taylor, Helen L., 5535 Delmar Blvd. 12
Ternberg, Jessie L., 600 S. Kingshighway Blvd. 10
Tess, Melvin J. H., 1501 Switzer St. 15
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Thoma, George E. Jr., 1402 S. Grand Blvd. 4
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Thomasson, Robert E., 100 N. Euclid Ave. 8
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Thompson, J., William III, 524 Warder Ave. 30
Thompson, Lawrence D., 634 N. Grand Blvd. 3
Thurman, Manfred, 1325 S. Grand Blvd. 4
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Tillman, Mary A. T., 4529 Red Bud Ave. 15
Tindall, Robert N., 6500 Chippewa St. 9
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Titterington, Paul F., 6830 Waterman Ave. 30
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Vandover, John T., 1504 S. Grand Blvd. 4
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Van Matre, R. M., 1436 Sheridan N. W., Washington, D. C.
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Vermillion, Crofford O., 600 S. Kingshighway Blvd. 10
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Vezeau, Stephen, 2710 S. Grand Blvd. 3
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Viviano, Joseph G., 16 Hampton Village Plaza 9
Vogel, Eugene A., 3325 S. Grand Blvd. 18
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Wade, James P., 634 N. Grand Blvd. 3
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Wald, Stanley M., 457 Kingshighway Blvd. 8
Walker, Francis S., 634 N. Grand Blvd. 3
Wall, Emmett D., 5823 Neosho St. 9
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Walton, Franklin E., 602 S. Euclid Ave. 10
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Warner, Robert G., 818 Olive St. 1
Wasserman, Helman C., 100 N. Euclid Ave. 8
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Webb, Paul B., 2603 Cherokee St. 18
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Webb, Paul K., 721 Olive St. 1
Weber, Eugene P., 3720 Washington Blvd. 8
Weiler, Thomas J., 634 N. Grand Blvd. 3
Weinel, Francis G., 5205 Chippewa St. 9
Weinsberg, William C., 3606 Gravois Ave. 16
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Dulick, Michael, 9012 Manchester Road 17
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Ecker, Decider B., Pacific
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Eidelman, Jack R., 4652 Maryland Ave. 8
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Eller, C. Howe, 801 S. Brentwood Blvd. 5
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Elson, Julius, 5 Granada, La Hacienda 24
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Ernst, Joseph G., 68 Fortune Lane 22
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Ferrara, John P., Northland Medical Bldg. 36
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Fingert, H. H., 4542 Maryland Ave. 8
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Finley, Freeman L., 2475 Hartland Ave. 14
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Flynn, Thomas T., 1617 S. Brentwood Blvd. 44
Forsman, Waldo W. Jr., 4128 Lindbergh Blvd. 26
Forsyth, B. Todd, 100 N. Euclid Ave. 8
Fox, Leon J., 4511 Forest Park Blvd. 8
Franklin, Harold A., 606 S. Meramec Ave. 5
Freiheit, Harold J., 3 Devondale Lane 31
Friedman, Robert H., 150 N. Meramec Ave. 5
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Fuchs, George J., 1 Fawnridge Court 41
Gaines, Quentin M., 136 W. Mermod St. 22
Gale, Arthur H., 2428 Woodson Road
Gale, Philip R., 9216 Clayton Road 24
Gall, Ira, 201 S. Central Ave. 5
Gaston, Ralph E., 1 Lynnbrook Road 31
Gaunt, Frank P., 203 W. Cedar Ave. 19
Gay, Elizabeth K., 2221 Duchess Drive 36
Gearhart, Wilbur H., 950 Francis Place 5
Gibstine, Marvin H., 10517 St. Charles Rock Road 14
Gieselman, Ralph V., 4952 Maryland Ave. 8
Gilcrest, Harry R., 601 S. Brentwood Blvd. 5
Gitt, Joseph J., 1025 S. Warson Road 24
Goldman, Hyman J., 457 N. Kingshighway Blvd. 8
Gollub, Samuel W., 8112 Delmar Blvd. 30
Goodman, J. N., 9 Frederick Lane 22
Goodman, Nathaniel, 8307 Jennings Road 36
Goodrich, Harold A., 19 E. Lockwood Ave. 19
Gowen, Leo F., 1114 Cheshire Lane 19
Grabau, Gene H., 8036 N. Broadway 15
Graeser, Richard G., Arcade Bldg. 1
Gray, Walter C., 8711 St. Charles Rock Road 14
Green, Manuel E., 1625 Tower Grove Ave. 10
Greenman, Marshall B., 950 Francis Place 5
Griot, Albert J., 4056 Toenges Ave. 16
Gronau, Axel R., 7062 Waterman Ave. 30

Grundmann, William H., 634 N. Grand Blvd. 3
Hagemann, Paul O., 3720 Washington Blvd. 8
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Halpern, Lawrence K., 950 Francis Place 5
Hamilton, Caldwell K., 35 N. Central Ave. 5
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Helbing, Edward J., 950 Francis Place 5
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Hengen, Henry E., 11223 St. Charles Rock Road, Bridgeton
Hershey, Falls B., 6621 Waterman Ave. 30
Hoard, Joseph W., 129 E. Kirkham Road 19
Hobbs, Alonzo G., 4101 Olive St. 8
Hobbs, John E., 630 S. Kingshighway Blvd. 10
Hofsommer, Armin C., 639 Lee Ave. 19
Hogancamp, Charles E., 135 W. Adams Ave. 22
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Johnson, Roy, 40 N. Florissant Road 35
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Jones, James B., 9335 Sonora Ave. 17
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Jotte, Richard F., 10300 St. Charles Rock Road 14
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Karsh, Robert S., 7514 Oxford Drive 5
Kaskie, Clifford R., 35 N. Central Ave. 5
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Kopp, Jules H., 4511 Forest Park Blvd. 8
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Larkin, Rosemary R., 2244 Union Road 25
Lauber, Joseph J., 17 Sona Lane 41
Leonhardt, Erwin M., 9015 Rock Forest Drive 23
Lerman, George S., 6340 Alamo Ave. 5
Leslie, Charles H., 209 S. Kirkwood Road 22
Levey, Simon A., 407 Kalen Drive 14
Levin, Marvin E., 2829 Stonington Place 31
Lewin, Wilbur H., 906 Olive St. 1
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London, Stanley L., 4919 Forest Park Blvd. 8
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Luehrs, Robert O., 230 S. Bemiston Ave. 5
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Lund, Robert H., 110 S. Central Ave. 5
Lyss, Carl, 100 N. Euclid Ave. 8
McCall, Edwin L., 9012 Manchester Road 17
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McClure, David N., 950 Francis Place 5
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McManamon, Thomas V., 6250 N. Lindbergh Blvd.
McMurray, Herbert C., Manchester
McNalley, Frank P., 950 Francis Place 5
McNalley, Michael, 950 Francis Place 5
Magee, Charles D., 418 Olive St. 2
Magee, William E., 4952 Maryland Ave. 8
Magidson, Joseph, 615 Forest Court 5
Magness, Guy N., 6651 Enright Ave. 30
Mahe, George A., 8039 Park Drive 17
Mangelsdorf, Thomas K., 4919 Buckingham Court 8
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Merrims, Theodore, 1241 Warson Pines 32
Merritt, Burch A., 7309 Natural Bridge Road 21
Merz, Jean J., 117 Frontenac Forest 31
Meyer, James E., Manchester
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Milder, Benjamin, 100 N. Euclid Ave. 8
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Missey, Wiburn C. Jr., 12047 Conway Road 31
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Monat, Seymour, 4511 Forest Park Blvd. 8
Montes-de-Oca, Julio, 11157 Conway Road 31
Moore, Harry G., 917 S. 18th St. 3
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Moore, Walter L., 6376 Clayton Road 17
Moore, William E., 7315 Pasadena Blvd. 21
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Nash, W. Hampton, 819 Locust St. 1
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Newport, Gerald, 21 Stoneyview Ave. 41
Noller, Henry W., 9440 Midland Ave. 14
Nonkin, Paul M., 390 W. St. Anthony Lane 31
Nuetzel, John A., 950 Francis Place 5
Nussbaum, Robert A., 3701 Grandel Square 8
O'Bannon, L. W. Jr., 11895 N. Ranch St.
O'Connor, Robert J., 751 St. Francois St. 31
Oglesby, Richard B., 950 Francis Place 5
O'Keefe, Joseph D., 135 W. Adams Ave. 22
O'Neal, Patricia, 4580 Scott Ave. 10
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Pennoyer, James, 117 Plant Ave. 19
Perry, H. Mitchell, 1983 Karlin Drive 31
Perry, William D., 100 N. Euclid Ave. 8
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Peugnet, Hubert B., 1617 S. Brentwood Blvd. 17
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Pipes, Keith E., 9001 W. Pine Ave. 17
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Probst, Raymond E., 3923 Watson Road 9
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Rao, Carlo, 18 Ladue Estates 41
Redington, James C. Jr., 1 Tuscany Park 5
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Rennard, Marvin, 4511 Forest Park Blvd. 8
Repp, Theodore J., 9311 Duenke Drive 37
Reynolds, Fred, 4960 Audubon Ave. 10
Riggio, Salvatore N., 9901 Gravois Road 23
Roberts, Harold K., 110 S. Central Ave. 5
Roberts, John P., Barrett Station Road 22
Roberts, John R., 100 N. Euclid Ave. 8
Robertson, Frank G., 634 N. Grand Blvd. 3
Robinson, Edith C., 2 Briar Oak 32
Roblee, Melvin A., 101 S. Meramec Ave. 5
Rogers, C. H., 812 Olive St. 1
Rogers, John A., 7550 Delmar Blvd. 30
Rohlfing, Edwin H., 8230 Forsyth Blvd. 24
Rolufs, Lloyd S., 135 W. Adams Ave. 22
Roodman, Herman J., 2428 Woodson Road 14
Roos, Albert, 1040 Sylvan Place 22
Rosecan, Marvin, 4910 Forest Park Blvd. 8
Rosenbaum, Herbert E., 100 N. Euclid Ave. 8
Rosenstein, Daniel L., 216 S. Kingshighway Blvd. 10
Roufa, Joseph F., 539 N. Grand Blvd. 3
Rouse, Ernest T., 100 N. Euclid Ave. 8
Rubenstein, Melvin, 4919 Buckingham Court 8
Rubin, Robert, 119 Church Road 35
Ruhling, Rudy, 5203 Chippewa St. 9
Ryan, John J., 28 Ridgetop 17
Salisbury, William J., 445 Bellerive Blvd. 11
Schattyn, Martyn, 539 N. Grand Blvd. 3
Schechter, Samuel E., 8000 Bonhomme Road 5
Scheele, Paul M., 135 W. Adams Ave. 22
Schlansky, Seymour M., 7247 Delmar Blvd. 30
Schluer, Elmer P., 3720 Washington Blvd. 8
Schmidt, Edmund M., 6704 W. Florissant Ave. 36
Schneider, Sam, 4652 Maryland Ave. 8
Schopp, Alvin C., 634 N. Grand Blvd. 3
Schultz, E. Robert, 3252 January 39
Schultz, Samuel, 2813 Watson Road 9
Schupmann, Gustav A., Box 128, R. R. 2, Chesterfield
Schwartz, Melvin M., 4511 Forest Park Blvd. 8
Schwartzman, Bernard, 4652 Maryland Ave. 8
Seabaugh, Ottis D., 105 W. Lockwood Ave. 19
Seabold, John A., 408 Mission Court 30
Shatz, Burton A., 4652 Maryland Ave. 8
Shobe, Frank O., 4500 W. Pine Blvd. 8
Silver, Bernd, 1332 Grand Drive 32
Silverberg, Charles, 45 Rio Vista Drive 24
Simril, Wayne A., 35 N. Central Ave. 5
Sisk, James C., 110 S. Central Ave. 5

Skilling, David M. Jr., 18 S. Kingshighway Blvd. 8
Skinner, John S., 31 Willow Hill Road 24
Smit, Herbert M., 539 N. Grand Blvd. 3
Smith, George E., 637 Tarrymore Lane 22
Smith, Jack I., 801 S. Brentwood Blvd. 5
Sommer, Ross B., 100 N. Euclid Ave. 8
Spector, Gene W., 216 S. Kingshighway Blvd. 10
Speno, Angelo A., 11815 Point Oak Drive 31
Spitz, Milton A., 8453 N. Indian Creek Parkway, Milwaukee, Wis.
Spoeneman, Marlin C., 7380 Overbrook Drive 21
Staehle, Melvin E., 7124 Natural Bridge Road 20
Stein, Harry J., 6917 W. Florissant Ave. 20
Stein, Leonard A., 2618 Oregon Ave. 18
Steiner, Alexander J., 3720 Washington Blvd. 8
Stephens, William A., 3720 Washington Blvd. 8
Sterling, John A., 1230 Kenmore Drive 22
Stevens, Robert W., 9311 Duenke Drive 37
Stewart, Frances H., 7161 Delmar Blvd. 30
Stickle, A. W., 135 W. Adams St. 22
Strauchen, Glibert W., 337 W. Lockwood Ave. 19
Stude, William C., 16 Hampton Village Plaza 9
Stuebner, Roland W., 35 N. Central Ave. 5
Suba, Antonio R., 950 Francis Place 5
Susman, Irvin C., 216 S. Kingshighway Blvd. 10
Sutphin, John B., 111 Church Road 35
Sutter, Richard A., 7215 Greenway Ave. 30
Tashma, Sigmund, 5847 Pershing Ave. 12
Teiber, Frederick W., 3201 Washington Blvd. 3
Thiele, Bemont R., 10261 Thornwood Drive 24
Thiele, O. K., 340 N. Main St., St. Charles
Tobias, Norman, 634 N. Grand Blvd. 3
Tomlinson, William L., 357 Violet Lane 19
Torin, Bernice A., 951 Old Bonhomme Road 32
Townsend, James A., 915 DeMun Ave. 5
Townsend, Vincent F., 7532 Byron Place 5
Treiman, Robert C., 7 Radnor Road 31
Tremain, E. E., 2901 Big Bend Blvd. 17
Trueblood, Alva C. Jr., 325 N. Kirkwood Road 22
Trunko, Leo, 1900 Telegraph Road 25
Tureen, Louis L., 1221 S. Grand Blvd. 4
Turner, James K., 35 N. Central Ave. 5
Ulett, Pearl C., 54 Picardy Lane 24
Valach, Frank J., 1617 S. Brentwood Blvd. 17
Vanderpearl, Robert H., 851 Edlin Drive 22
Vatterott, Paul B., 10300 St. Charles Rock Road 14
Viers, Wayne A., 135 W. Adams Ave. 22
Vinyard, Paul, 3718 Olive St. 8
Viraghaty, Julius Gy., Route 1, Box 483, Manchester
Vitale, Anthony J., 7130 Natural Bridge Road 34
Vitale, Nicholas S., 7130 Natural Bridge Road 34
Vizgird, J. J., 3511 University Ave. 7
Vollmar, Clarence J., 8787 Big Bend Blvd. 19
Votaw, Robert E., 10 Warson Ter. 24
Walker, Harvey Jr., 6924 Waterman Ave. 30
Walker, Willard B., 110 S. Central Ave. 5
Wall, Albert, 5322 Helen Ave. 20
Walter, William L., 135 W. Adams Ave. 22
Walther, Roy A. Jr., 7 High Acres 32
Waters, E. B., 126 E. Jefferson Ave. 22
Weber, J. R., 135 W. Adams Ave. 22
Weber, Sol, 607 N. Grand Blvd. 3
Weber, William K., 4323 Gladwyn Drive, Bridgeton
Weinhaus, Robert S., 7165 Delmar Blvd. 30
Weisbrod, Wilfred B., 1025 North & South Road 30
Weisman, Renate D., 2050 Woodson Road 14
Weisman, Sol, 4652 Maryland Ave. 8
Weitman, Maximilian, 3530 Arsenal St. 18
Wenneker, Alvin S., 8112 Delmar Blvd. 30
Werth, Duncan S., 61 N. Taylor Woods 22
West, Joseph W., 906 Olive St. 1
Westrup, Ellsworth A., 8540 Big Bend Blvd. 19
Whitener, Miles C., 3109 Brown Road 14
Whitener, Paul R., 3109 Brown Road 14
Wiedershine, Leonard J., 4511 Forest Park Blvd. 8
Williamson, O. E., 6336 Clayton Road 17
Wissmath, Frank S., 35 N. Central Ave. 5
Wittler, Harry A., 2817 Manderly Drive 44
Wolff, Harold D., 4511 Forest Park Blvd. 8
Wood, James A., Clayton Medical Bldg. 5
Wulff, George J. L. Jr., 6 Graybridge Lane 24
Wyatt, Lois C., 134 W. Adams Ave. 22
Yanow, Mitchell, 201 S. Central Ave. 5
Young, John S., 1720 Arundel Drive 33
Zimmerman, Herbert B., 8026 Comstock Drive 14
Zwirn, Benjamin H., Northland Medical Bldg. 36

SALINE COUNTY MEDICAL SOCIETY

Aiken, George A., Marshall
Aiken, Richard F., Marshall
Blalock, Robert W., Marshall
Day, Anthony B., Marshall
Haynes, Robert C., Marshall
Knipschild, B. F., Marshall
Lawless, Charles L., Marshall
Lawrence, John R., Marshall
McBurney, Alexander A., Mary Hitchcock Memorial Hospital, Hanover, N. H.
McBurney, C. A., Slater
McCorkle, E. Lee, Marshall
Madison, Waite H., 4646 Benton Blvd., Kansas City
Mead, Samuel T., Slater
Reid, James A., Marshall
Roehrs, Marvin E., Marshall
Sloan, Roy C., Marshall
Watson, Cecil L., Marshall

SCHUYLER COUNTY

(North Central Counties Medical Society)

SCOTLAND COUNTY

(Lewis-Clark-Scotland County Medical Society)

SCOTT COUNTY

(SEMO County Medical Society)

SEMO COUNTY MEDICAL SOCIETY

(Stoddard-New Madrid-Mississippi-Scott Counties)

Blanton, J. C., Sikeston
Bruce, Leo A., Sikeston
Buckthorpe, Thelma C., Sikeston
Comeau, Richard, Dexter
Critchlow, William C., Sikeston
Davis, Wilbur L., Charleston
Dernoncourt, John E., Charleston
Dieckman, William C., Dexter
Dunaway, Howard A., Sikeston
Ellis, Burnett E., Gideon
Ferguson, Wilson J., Sikeston
Finney, William O., Chaffee
Frazier, Robert L., Charleston
Heeb, Max A., Sikeston
Husted, George W., Parma
McClure, Thomas C., 5220 N. E. 31st Ave., Fort Lauderdale, Fla.
Marshall, Alfred H., Charleston
Martin, Andrew D., Sikeston
O'Dell, Timothy T., Oran
Page, Jesse W., Sikeston
Popp, Carl G., Sikeston
Reeder, Charles C., New Madrid
Rehm, Ralph, Bloomfield
Rolwing, E. Charles, Charleston
Sargent, Alden P., Sikeston
Sargent, John P., Sikeston
Sarno, Samuel M., Morehouse
Smith, Audra B., Sikeston
Throgmorton, Howard B., Sikeston
Tull, Frank, Sikeston
Urban, Edgar D., Sikeston
Waddle, Theodore L., Dexter
Waltrip, Roy T. Jr., Sikeston
Whitaker, Topsey H., East Prairie

SHANNON COUNTY

(Carter-Shannon County Medical Society)

SHELBY COUNTY

(Marion-Ralls-Shelby County Medical Society)

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

(Howell-Oregon-Texas-Wright-Douglas-Ozark Counties)

Burns, Thomas J., Houston
Callihan, Charles F., West Plains
Coffee, Amos L., Willow Springs
Cooper, Claude W., Thayer
Denney, Richard W., Mountain Grove
Dreyer, William F., Houston
Fowler, Marvin L., West Plains
Frame, Homer G., 1216 Cherry St., Springfield
Gentry, Marvin C., Ava
Hasek, James A., Cabool
Miller, Harold W., Willow Springs
Smith, C. Franklin, Willow Springs
Smith, Rollin H., West Plains
Spears, Joe L., Cabool
Tiffany, D. E., Mountain View
Walker, Ambrose T., Mammoth Springs, Ark.
Wall, Joe A., Houston
Walton, Marion C., Mountain View
Wiles, Jack N., West Pains
Wilson, John E., West Plains

STODDARD COUNTY

(SEMO County Medical Society)

STONE COUNTY

(Ozarks Medical Society)

SULLIVAN COUNTY

(North Central Counties Medical Society)

TANEY COUNTY

(Ozarks Medical Society)

TEXAS COUNTY

(South Central Counties Medical Society)

VERNON COUNTY

(West Central Missouri Medical Society)

WARREN COUNTY

(Franklin-Gasconade-Warren County Medical Society)

WASHINGTON COUNTY

(Mineral Area County Medical Society)

WAYNE COUNTY

(Butler-Wayne-Ripley County Medical Society)

WEBSTER COUNTY MEDICAL SOCIETY

Bareis, Robert J., Marshfield
Beers, Ellsworth G., Seymour
Macdonnell, Carey R., Marshfield
Macdonnell, Thomas M., Marshfield

WEST CENTRAL MISSOURI MEDICAL SOCIETY

(Bates-Cass-Cedar-St. Clair-Vernon Counties)

Allen, Claude J., Rich Hill
Allen, William H., Nevada
Barger, O. B., Harrisonville
Barone, Paul L., Nevada
Baska, Richard E., 1001 W. 101st Ter., Kansas City
Brownsberger, Robert H., Appleton City
Combs, Joe D., Nevada
Davis, C. Braxton, Nevada
Doggett, Sylvester, Sikeston
Eklund, Alfred W., Pleasant Hill
Ellett, William H., Appleton City
Geisler, Donald H., Osceola
Gorrell, Ned B., Nevada
Hansen, Arthur L., Butler
Jones, Edward S., Harrisonville
King, Elbert R., Route 2, Boise, Idaho
LaHue, Lilburn D., Butler
Long, David S., Harrisonville
Love, Walter S., Nevada

Lusk, Charles A. Jr., Butler
Luter, Carter W., Butler
McCann, Louis P., Nevada
Magee, Robert L., Eldorado Springs
Martin, Forrest L., Nevada
Masor, Nathan A., Butler
Moody, Jackson C., Methodist Hospital, Bedor Mysore State, India
Morrison, George B., Nevada
Mullinax, Orr, Nevada
Pascoe, James J., Nevada
Pearse, Roy W. Jr., Nevada
Pickens, E. Allen, Nevada
Richter, William B., Stockton
Rinck, Edward C., Nevada
Ronald, Douglas C., Butler
Stewart, Worley K., Eldorado Springs
Todd, Thomas B., Nevada
Tracy, Herbert A., Belton
Tracy, Terry A., Belton
Wheeler, Robert L., Harrisonville
Williams, Thomas A., Osceola
Wray, Rolla B., Nevada

WORTH COUNTY
(Northwest Missouri Medical Society)

Woman's Auxiliary to the Missouri State Medical Association

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1462 S. Dollison St., Springfield 65804
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Boonville Road, Jefferson City 65101
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351 Meadow Brook, Ballwin 63011
Treasurer
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616 Ridgeway Drive, Liberty 64068
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102 E. Rea St., Marshall 65340
Parliamentarian
Mrs. Oliver E. Tjoflat
252 Woodbourne Drive, St. Louis 63105

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43 Clermont Lane, St. Louis 63124
Fourth District
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6202 Nottingham St., St. Louis 63109
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1 Ivy Lane, Fulton 65251
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6436 High Drive, Shawnee Mission, Kan. 66208
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Mrs. Jerry H. Allen
1324 S. Fairway Ter., Springfield 65804
Ninth District
Mrs. Claude Cooper
Thayer 65574
Tenth District
Mrs. James F. Fairchild
Wild Acres, Rt. 2, Perryville 63775

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19 Country Life Acres, St. Louis 63131
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Mrs. Ralph Bohnsack
1017 Brookfield Ave., Brookfield 64628
Bulletin, Quarterly
Mrs. Leo P. FitzGerald
7219 Cornell Ave., St. Louis 63130
Bylaws
Mrs. Lawrence S. Crispell
911 Kensington Road, Joplin 64801
Circulation Manager
Mrs. William A. Knight Jr.
12 Briarcliff, St. Louis 63124
Community Service
Mrs. G. W. N. Eggers Jr.
100 Westwood St., Columbia 65201
Courtesy
Mrs. Wallace R. Stacey
3407 Shady Bend Drive, Independence 64052
Disaster Preparedness
Mrs. Hugh Brady
Concordia 64020
Doctor's Day
Mrs. James T. Leslie Jr.
1427 Major Drive, Jefferson City 65101
Finance
Mrs. A. J. Crider
Dixon 65459
Vice Chairman
Mrs. Russell J. Crider
1875 S. River Road, St. Charles 63301
Health Careers Recruitment
Mrs. Daniel B. Landau
2901 Pleasant Ave., Hannibal 63401
International Health Activities
Mrs. L. O. Muench
1530 Riverview Drive, Washington 63090
Legislation
Mrs. Charles W. Chastain
301 W. Liberty St., Farmington 63640
Members-at-Large
Mrs. Doyle C. McCraw
701 N. Main St., Bolivar 65613
Mental Health
Mrs. Henry V. Guhleman Jr.
1710 Greenbury Road, Jefferson City 65101
Organization
Mrs. James K. Ritterbusch
2 Bartley Lane, Fulton 65251

Point System
MRS. SEYMOUR J. KRANSON
11 Hawthorne Place, Independence 64052
MRS. THEODORE F. EDWARDS
2205 E. 39th St., N. Kansas City 64116
MRS. RALPH PERRY
7140 Sni-A-Bar Road, Kansas City 64129
Press and Publicity
MRS. JOHN W. DEYTON
659 Fairview Ave., Webster Groves 64119
Program
MRS. JACK ESTES
57 S. Dellwood Ave., St. Louis 63135
Rural Health
MRS. RAYMOND J. BOZZO
408 W. 2nd St., Washington 63090
Safety
MRS. WILLIAM WALKER
1930 Arcadia Ave., Springfield 65804
Senior Citizens
MRS. E. E. WADLOW
2611 Lovers Lane, St. Joseph 64506

Fall Conference—October 28-29, 1964, TAN-TAR-A
(5th & 6th Districts)
Annual Convention—April 4-7, 1965, Kansas City

AUXILIARIES AND COUNTY MEDICAL SOCIETIES LISTED BY DISTRICTS

FIRST DISTRICT: Andrew,* Buchanan, Clay, Clinton,* Grand River (Caldwell, Carroll, Daviess, DeKalb, Grundy, Harrison, Linn, Livingston, Mercer), Northwest Missouri (Nodaway, Holt, Atchison, Gentry, Worth),* Platte.*

SECOND DISTRICT: Chariton-Macon-Monroe-Randolph,* Clark-Lewis-Scotland,* Marion-Ralls-Shelby, North Central (Adair, Knox, Putnam, Schuyler, Sullivan).*

THIRD DISTRICT: St. Louis City.

FOURTH DISTRICT: Franklin-Gasconade-Warren,* Jefferson, Lincoln-St. Charles,* St. Louis County.

FIFTH DISTRICT: Audrain, Boone, Callaway, Camden,** Cole, Cooper, Howard,* Miller-Morgan-Moniteau, Montgomery.*

SIXTH DISTRICT: Benton,* Henry,* Johnson, Lafayette-Ray, Pettis, Saline, West Central (Bates, Cass, Cedar, St. Clair, Vernon).

SEVENTH DISTRICT: Jackson County.

EIGHTH DISTRICT: Barton-Dade,* Dallas-Hickory-Polk,* Greene, Jasper, Ozarks (Barry, Christian, Lawrence, McDonald, Newton, Stone, Taney), Webster.*

NINTH DISTRICT: Carter-Shannon,* Mid-Missouri (Crawford, Dent, Laclede, Maries, Phelps, Pulaski),* South Central (Douglas, Howell, Oregon, Ozark, Texas, Wright).

TENTH DISTRICT: Bollinger,** Butler-Ripley-Wayne, Cape Girardeau, Dunklin, Mineral Area (Iron, Madison, Reynolds, St. Francois, Washington), Pemiscot,* Perry-Ste. Genevieve, SEMO (Mississippi, New Madrid, Scott, Stoddard).*

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* Denotes no organized Auxiliary.
** Denotes no Medical Society.

SPECIAL COMMITTEES

Nominations
MRS. LAWRENCE S. CRISPELL
911 Kensington Road, Joplin 64801
MRS. PUGH HAYNES
8006 Gannon Ave., St. Louis 63130
MRS. WALLACE R. STACEY
3407 Shady Bend Drive, Independence 64052
MRS. ROBERT H. STEWART
201 Driftwood Drive, Sedalia 65301
MRS. VIRGIL DALE VANDIVER
1836 Polk St., Chillicothe 64601
Reading
MRS. RALPH BOHNSACK
1017 Brookfield Ave., Brookfield 64628
MRS. THEODORE FISCHER
Altenburg 63732
MRS. DOYLE C. WHITMAN
6836 Cherokee, Shawnee Mission, Kan. 66208

MSMA ADVISORY COUNCIL

KENNETH C. HOLLWEG, M.D.
4320 Wornall Road, Kansas City 64111
DAVID N. KERR, M.D.
950 Francis Place, St. Louis 63105
BYRON M. STUART, M.D.
329 Main St., Boonville 65233

ORGANIZED COUNTIES AND THEIR PRESIDENTS LISTED ALPHABETICALLY

Audrain
MRS. NED D. RODES
625 Lakeview Ave., Mexico 65265
Boone
MRS. THOMAS BURNS
310 E. Brandon Road, Columbia 65201
Buchanan
MRS. E. F. BUTLER
3804 Seneca St., St. Joseph 64507
Butler-Ripley-Wayne
MRS. T. E. RUFF
1411 Rosedale Ave., Poplar Bluff 63901
Callaway
MRS. EDWARD R. TELLEZ
207 Lynn Ave., Fulton 65251
Cape Girardeau
MRS. GEORGE MAGALETTA
957 E. Rodney Drive, Cape Girardeau 63701
Clay
MRS. JAMES WILLOUGHBY
420 N. Ridge Ave., Liberty 64068
Cole
MRS. JACK SANDERS
2008 Livingston St., Jefferson City 65101
Cooper
MRS. WILLARD AVERY
20 Crestview Drive, Boonville 65233
Dunklin
MRS. JOE A. ZIMMERMAN
906 W. Washington St., Kennett 63857
Grand River
MRS. GEORGE MANDLER
1616 Clay St., Chillicothe 64601

Greene
Mrs. J. G. Siceluff
Rt. 9, Springfield 65804

Jackson
Mrs. Carl R. Ferris
629 W. 70th Ter., Kansas City 64113

Jasper
Mrs. Sandor D. Papp
3343 Pearl Ave., Joplin 64803

Jefferson
Mrs. F. L. Kozal
Treebrook Drive, Crystal City 63019

Johnson
Mrs. A. L. Folkner
316 Hillcrest Ave., Warrensburg 64093

Lafayette-Ray
W. E. Koppenbrink Jr.
Higginsville 64037

Marion-Ralls-Shelby
Mrs. Donald Glascock
Palmyra 63461

Miller-Morgan-Moniteau
Mrs. Carl T. Buehler Jr.
608 Newton St., Eldon 65026

Mineral Area
Mrs. Jack Foster
Cantwell 63601

Perry-Ste. Genevieve
Mrs. C. A. Carron
208 N. Waters St., Perryville 63775

Pettis
Mrs. A. J. Campbell Jr.
1500 West 16th St., Sedalia 65301

St. Louis City
Mrs. J. Otto Lottes
1028 Winwood Drive, St. Louis 63124

St. Louis County
Mrs. Edmund V. Cowdry
30 Crestwood Drive, Clayton 63105

Saline
Mrs. Bedford F. Knipschild
505 N. Brunswick St., Marshall 65340

South Central
Mrs. Amos Coffee
Willow Springs 65587

West Central
Mrs. O. B. Barger
Box 191, Harrisonville 64701

PAST STATE PRESIDENTS—1924-1964

Mrs. George H. Hoxie* (Jackson)**	1924-25
Mrs. M. P. Overholzer* (West Central)	1925-26
Mrs. Arthur B. McGlothlan (Buchanan)** 821 N. 24th St., St. Joseph 64506	1926-27
Mrs. W. M. Bickford* (Saline)	1927-28
Mrs. Willard Bartlett (St. Louis City) 53 Westmoreland Place, St. Louis 63108	1928-29
Mrs. M. P. Ravenal* (Boone)	1929-30
Mrs. A. W. McAlester* (Jackson)	1930-31
Mrs. U. J. Busiek (Greene) 1635 E. Walnut St., Springfiel 65802	1931-32
Mrs. David S. Long (West Central) M. 40, Lake Lotawana, Lee's Summit 64063	1932-33
Mrs. Hudson Talbot (St. Louis City) 405 Winton Lane, Louisville, Ky. 40206	1933-34
Mrs. W. H. Goodson* (Clay)	1934-35
Mrs. Walter C. Kirchner* (St. Louis City)	1936-37
Mrs. M. Pinson Neal* (Boone)	1935-36
Mrs. Charles H. Werner* (Buchanan)	1937-38
Mrs. Herbert J. Mantz (Jackson) 1209 Romany Road, Kansas City 64113	1938-39
Mrs. Paul F. Cole (Greene) 1819 Maine St., Quincy, Ill. 62301	1939-40
Mrs. S. P. Howard (Cole) 3505 Greenwood Drive, Waco, Tex. 76708	1940-41
Mrs. J. J. Drace (Cape Girardeau) Claran Apartments, Cape Girardeau 63701	1941-42
Mrs. Frank L. Davis* (St. Louis City)	1942-43
Mrs. Robert C. Haynes (Saline) 754 Eastwood St., Marshall 65340	1943-44
Mrs. J. B. McCubbin (Callaway) 531 E. 20th St., New York, N. Y. 10010	1944-45
Mrs. Harry M. Gilkey* (Jackson)	1945-46
Mrs. W. E. Koppenbrink Sr. (Lafayette-Ray) Higginsville 64037	1946-47
Mrs. W. L. Allee* (Miller-Morgan-Moniteau)	1947-48
Mrs. August A. Werner* (St. Louis City)	1948-49
Mrs. John J. O'Connell (St. Louis County) 1937 O'Connell Ave., Overland 63114	1949-50
Mrs. Dwight T. Van Del (Jackson) 6737 Rockhill Road, Kansas City 64131	1950-51
Mrs. W. Carey Cheek (Greene) 1535 E. Meadowmere, Springfield 65804	1951-52
Mrs. Richard A. Sutter (St. Louis County) 7215 Greenway Drive, University City 63130	1952-53
Mrs. C. Alex McBurney (Saline) 927 Hurt St., Slater 65349	1953-54
Mrs. W. E. Martin (Lafayette-Ray) 403 S. Second St., Odessa 64076	1954-55
Mrs. Frank B. Leitz (Jackson) 6832 Locust St., Kansas City 64131	1955-56
Mrs. Charles T. Shepherd (St. Louis County) 10 Covington Meadows, St. Louis 63132	1956-57
Mrs. Armand D. Fries (St. Louis City) 11 West Geyer Lane, St. Louis 63131	1957-58
Mrs. Henry C. Bauman (Northwest Missouri) 929 W. Third St., Maryville 64468	1958-59
Mrs. Stanley S. Peterson (Greene) 721 E. Stanford St., Springfield 65804	1959-60
Mrs. Jordan Kelling (Lafayette-Ray) Waverly 64096	1960-61
Mrs. Frederick E. Wade (Jackson) 413 W. 62nd St., Kansas City 64113	1961-62
Mrs. J. Martyn Schattyn (St. Louis County) 9 Huntleigh Downs, St. Louis 63131	1962-63
Mrs. Lawrence S. Crispell (Jasper) 911 Kensington Road, Joplin 64801	1963-64

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* Deceased.
** National President.

List of Woman's Auxiliary by Society

AUDRAIN COUNTY
(Mexico)

Bradley, Mrs. William W., Farber
Davis, Mrs. Leonard, 725 Lakeview Ave.
Dwyer, Mrs. Thomas L., 301 N. Cole St.
Epple, Mrs. Lawrence K., 502 E. Monroe St.
Gantt, Mrs. Ernest S., 108 W. Teal Lake Road
Garcia, Mrs. C. L., 8 Melody Lane
Jolley, Mrs. J. F., 726 W. Monroe St.
Jolly, Mrs. Ben, So. Jefferson Road
Kallenbach, Mrs. Glen P., R.F.D. 2
Kittleberger, Mrs. George Wm., 1101 West St.
Lankford, Mrs. Harold D., 1025 S. Olive St.
O'Brien, Mrs. Harry F., 408 Harvard St.
Parrish, Mrs. J. C., 206 W. State St., Vandalia
Pirrello, Mrs. A. Jr., South Blvd.
Rodes, Mrs. Ned D., 625 Lakeview Ave.
Rouse, Mrs. David M., 1415 Hickory Hill
Wallace, Mrs. Ed S., 811 S. Jefferson St.

BOONE COUNTY
(Columbia)

Allen, Mrs. Horace, 2109 Valley View Drive
Allen, Mrs. Joseph, 2000 N. Allen Drive
Allen, Mrs. William, 2401 Highland Drive
Anast, Mrs. Constantine, 700 Thilly St.
Anderson, Mrs. Philip C., 908 Edgewood St.
Asel, Mrs. Norman, 1112 S. Glenwood St.
Austin, Mrs. George C., 103 Longfellow Lane
Baker, Mrs. James, R.F.D. 4
Basket, Mrs. Edgar, 1316 Bass Ave.
Bingham, Mrs. Hal G., 11 Rockingham Drive
Black, Mrs. Samuel, 300 S. Glenwood St.
Bradford, Mrs. O. F., Frederick Apartments
Bruner, Mrs. Claude, 511 S. Glenwood St.
Buessler, Mrs. John, 813 Maupin Road
Bumgarner, Mrs. James, 1815 Rollins St.
Bumgarner, Mrs. Roger, Route 1
Burns, Mrs. Thomas, 1009 S. Providence Road
Chalkley, Mrs. Judson, 614 W. Stewart Road
Cochran, Mrs. Donald, 112 Sappington Road
Cooper, Mrs. Maurice, 1000 Wayne Road
Cope, Mrs. James, 609 Crestland Ave.
Darnell, Mrs. Thomas F. B., 2617 Walther Court
Denninghoff, Mrs. James C., 1906 Vassar St.
Eggers, Mrs. G. W. N. Jr., 100 Westwood St.
Evans, Mrs. Alden, 807 Maupin Road
Flynn, Mrs. Joseph, 1121 S. Glenwood St.
Froelich, Mrs. Robert E., 604 W. Broadway
Fuchs, Mrs. George Jr., 1026 Hickory Hill Drive
Galeota, Mrs. William, 1719 Ridgemont Ave.
Garrett, Mrs. Glen, 102 East Brandon Road
Gaunt, Mrs. William, 1125 St. Christopher St.
Griffin, Mrs. William T., 107 Westwood St.
Hall, Mrs. David G., 1014 S. Glenwood St.
Hall, Mrs. John, 1203 E. Walnut St.
Hanlon, Mrs. Russell, 1606 Highridge Circle
Hardwicke, Mrs. Henry, Ashland
Jackson, Mrs. Robert L., 1103 W. Stewart Road
Johnson, Mrs. Richard, 109 Circle Ridge Drive
Keown, Mrs. Kenneth, 402 Westmount St.
Kubin, Mrs. Milford, Route 4
LaChance, Mrs. Leopold, Centralia
Ladenson, Mrs. Roland, 704 Westmount St.
Leach, Mrs. Charles, 815 W. Stewart Road
Logue, Mrs. John, 700 Crestland Ave.
Lucas, Mrs. Fred, 2 Ridgeley Road
Mackenzie, Mrs. James William, 2609 Highland Drive
Marienfeld, Mrs. Carl, 304 Longfellow Lane
Martt, Mrs. Jack, 2205 Danforth Court
Mayer, Mrs. William, 1000 Lakeshore Drive
McElroy, Mrs. Glenn, R.F.D. 3
Miller, Mrs. LeRoy, 32 Bingham Road
Mitchell, Mrs. Frank, 810 Greenwood Court
Modlin, Mrs. John, 706 Thilly St.
Overholser, Mrs. Milton, 110 E. Brandon Road
Payne, Mrs. John, 805 W. Broadway
Pingleton, Mrs. William, 113 Tracy Drive
Ray, Mrs. C. Thorpe, 822 Greenwood Court
Rodgers, Mrs. Elrie, 202 S. Glenwood St.
Scheuber, Mrs. Charles, 505 West Boulevard S.
Schmidtke, Mrs. Edwin C., 105 S. Glenwood St.
See, Mrs. William, 1611 University St.
Sheppard, Mrs. Lee C. Jr., 608 Manor Drive
Sights, Mrs. Warren, 309 Tracy Drive
Smith, Mrs. Grafton, 917 Crestland Ave.
Smith, Mrs. J. Ned Jr., 701 West Boulevard S.
Smith, Mrs. Joe R., 222 East Parkway
Spratt, Mrs. John, Jr., 204 Leslie Lane
Spurgeon, Mrs. Milo, 404 Edgewood St.
Stewart, Mrs. William, R.R. 5
Stoeckle, Mrs. Harry, 2226 Shepard Blvd.
Ridings, Mrs. G. Ray, 810 Yale St.
Robnett, Mrs. Dudley A., 2103 S. Country Club Drive
Ross, Mrs. Gilbert, 300 McNabb Drive
Sabates, Mrs. Felix, 308 Bourn Ave.
Somers, Mrs. John, 1902 Tipton Ter.
Thompson, Mrs. Ian, 504 Edgewood St.
Tinsley, Mrs. John C., 104 S. Glenwood St.
Waggoner, Mrs. Charles, 712 Hilltop Drive
Walters, Mrs. John, 1027 Hickory Hill Drive
Washington, Mrs. Edward L., 204 Stewart Road
Watson, Mrs. Trevor F., 2319 Bluff Blvd.
Weintraub, Mrs. Herbert, 1720 East Broadway
Weiss, Mrs. James, 101 S. Glenwood St.
White, Mrs. J. Earl, 104 East Parkway
Wilson, Mrs. George P., 918 Westwinds Drive
Wilson, Mrs. Vernon, Route 4
Windmiller, Mrs. M. Eugene, 210 S. Glenwood St.
Wolcott, Mrs. Lester E., 109 Russell Blvd.

BUCHANAN COUNTY
(St. Joseph)

Baker, Mrs. W. C., Savannah
Barrera, Mrs. Alberto M., 3343 Mueller Lane
Bascom, Mrs. Charles H., 2505 Edmond St.
Beck, Mrs. Paul M., 3216 Coronado Road
Benson, Mrs. Scott C., 1404 N. 26th St.
Berney, Mrs. Francis J., 1225 N. 10th St.
Bristow, Mrs. Robert B., 1610 Ashland St.
Bryant, Mrs. Sydney L., 3902 N. 29th St.
Butler, Mrs. E. F., 3804 Seneca St.
Byrne, Mrs. J. I., 1915 Lovers Lane
Callman, Mrs. George, State Hospital
Carle, Mrs. H. W. Jr., 2707 N. 26th St.
Carpenter, Mrs. G. T., 2612 Indian Trail
Chiarottino, Mrs. Joseph F., 11 Lindenwood Lane
Christ, Mrs. Martin H., 14 Benton Drive
Craig, Mrs. Owen W. D., 1625 Crescent Drive
Craig, Mrs. Richard O., 2724 Felix St.
Curran, Mrs. Herbert, 2123 Newport Road
Day, Mrs. Maxwell, 2111 Lovers Lane
Denton, Mrs. James, 2907 Sherman Ave.
DuMont, Mrs. Clement, 1905 Francis St.
Durham, Mrs. S. L., Dearborn
Fisher, Mrs. Joseph L., 2903 Ashland Ave.
Forgrave, Mrs. John R., 1908 Clay St.
Forgrave, Mrs. Leon Paul, Hundley Drive
Forman, Mrs. George W., 2412 Ashland Ave.
Grant, Mrs. Claude S., 7 Lindenwood Lane
Gray, Mrs. W. W., 3102 S. 22nd St.
Grimes, Mrs. Manning E., 815 N. Noyes St.
Gunter, Mrs. Joe S., 1609 Ashland Ave.
Handler, Mrs. Eric, 1070 Crestview Lane
Hartigan, Mrs. F. X., 1801 Ashland Ave.
Hayes, Mrs. Paul W., 610 N. Noyes St.
Herman, Mrs. Allen I., 1909 N. 32nd St.
Howden, Mrs. Thomas L., 2723 Francis St.
Ide, Mrs. Lucien W., 1416 N. 25th St.
Johnstone, Mrs. Daniel M., 3120 Oakland Ave.
Kieber, Mrs. R. W., 1915 N. 33rd St.
Kline, Mrs. Edmund W., 17 Stonecrest St.
Knepper, Mrs. Paul, 2002 Ashland Ave.
Knoke, Mrs. Fred, 3425 Beck Road
Kulowski, Mrs. Jacob, 2515 Francis St.
Lee, Mrs. Carleton H., 2716 Douglas St.
Lewinsohn, Mrs. Hugo, State Hospital
Luckinbill, Mrs. Paul, Plattsburg
Mabrey, Mrs. John P., Plattsburg
Maginn, Mrs. R. L., 1813 Lovers Lane Heights
Marston, Mrs. F. James, 3212 Coronado St.
Martin, Mrs. John, 9 Lindenwood Lane
McDaniel, Mrs. John R., 1808 N. 29th St.
McDonald, Mrs. Wilbur P., 6 Country Club Road
McGlothlan, Mrs. A. B., 821 N. 24th St.
Meluney, Mrs. S. E., 1810 N. 30th St.
Minton, Mrs. W. H., 2221 Eugene Field St.
Moen, Mrs. Berwyn H., 2214 Carper Drive
Morse, Mrs. Marvin W., 2702 Faraon St.
Mothershead, Mrs. John L., 2630 Fairleigh Ter.
Ness, Mrs. Carl K., 8 Lindenwood Lane
O'Connor, Mrs. William B., 2316 N. 22nd St.
Petersen, Mrs. Harold E., 2902 Frederick St.
Pettit, Mrs. Manson B., 3315 Frederick St.
Pfeffer, Mrs. Robert, 1915 N. 29th St.
Potter, Mrs. Caryl Jr., 2232 Eugene Field St.
Potter, Mrs. Thompson E., 2106 Lovers Lane
Redmond, Mrs. William, 3102 Jule St.
Riddell, Mrs. Richard V., 2610 Indian Trail
Rogers, Mrs. John T., 2502 Ashland Ave.
Rosenthal, Mrs. Irwin, 2715 Union St.
Rost, Mrs. William B., 2221 Northwest Extension
Roundy, Mrs. Collis I., R.F.D. 2
Saferstein, Mrs. T. H., 2903 Sherman St.
Senne, Mrs. Herbert C., 1308 S. Noyes St.
Shevlin, Mrs. Charles F., 804 N. 25th St.
Sklenar, Mrs. Donald E., 2006 Manchester St.
Smith, Mrs. Clifton, 2821 Ashland Ave.
Stallard, Mrs. Donald J., 1417 N. 25th St.
Thomas, Mrs. Forrest, 1301 N. 25th St.
Thompson, Mrs. F. Gregg III, 2714 Ashland Ave.
Thompson, Mrs. F. Gregg Jr., 631 Hall St.
Wadlow, Mrs. Ernest E., 2611 Lovers Lane
Waggoner, Mrs. Sharon E., 5820 S. 3rd St.
Weed, Mrs. Randall W., 1821 Clay St.
Whitsell, Mrs. Ora Earl, 2306 Sacramento St.
Willman, Mrs. Charles, 2115 Lovers Lane
Willumsen, Mrs. Henry C., 2209 Eugene Field St.

BUTLER COUNTY
(Poplar Bluff)

Barbour, Mrs. Marvin R., 1721 N. Main St.
Biggs, Mrs. Fred J. Jr., 808 N. Main St.
Brookreson, Mrs. A. F., 321 Oak St.
Caldwell, Mrs. Fred, 1705 Seifert Drive
Dinelli, Mrs. Frank E., 427 N. Main St.
Engelhardt, Mrs. Robert C., 1513 Rosedale Lane
Gernstetter, Mrs. S. L., Box 337
Hansbrough, Mrs. Eugene T., 1111 Fairmount
McLain, Mrs. B. M., 724 Cynthia St.
Miller, Mrs. David V., Hwy. 67 South
Parker, Mrs. Arthur C. Jr., 708 Selma St.
Post, Mrs. Cyril A., 960 Cynthia St.
Robertson, Mrs. William D., 900 North St.
Ruff, Mrs. T. Eugene, 1411 Rosedale St.
Tapp, Mrs. Ernest M., 1401 Lurlyn Road
Tenpenny, Mrs. J. W., 804 Oak Hill Road
Tuma, Mrs. A. T., 1601 Big Bend Road
Turner, Mrs. James H., R.R. 1
Turner, Mrs. William F., 1308 Nooney St.
Wright, Mrs. John, Lurlyn Drive

CALLAWAY COUNTY
(Fulton)

Brown, Mrs. John J., 1304 N. Vine St.
Cremer, Mrs. William J., State Hospital Drive
Durst, Mrs. Henry, 1 Ivy Lane
Groce, Mrs. George, 1 Bartley Lane
Hill, Mrs. James E., Washington St.
Jackson, Mrs. Vernon, Hams Prairie

Kepler, Mrs. Earl C., 109 Reed St.
Peterson, Mrs. Donald, Route 1
Ritterbusch, Mrs. James K., 2 Bartley Lane
Robertson, Mrs. Robert C., State Hospital Drive
Schuetz, Mrs. Alfred, 2 W. Reed St.
Sydow, Mrs. Henry, 1014 Chippewa St.
Tellez, Mrs. Edward, Lynn Ave.
Wood, Mrs. George F., 1700 Plaza Drive

CAPE GIRARDEAU COUNTY

(Cape Girardeau)

Alyea, Mrs. James, 1873 Marietta St.
Ashley, Mrs. Hugh V. Sr., 444 Marie St.
Ashley, Mrs. Hugh V. Jr., 1201 Perry St.
Bahn, Mrs. Charles, 2418 Brookwood St.
Barnes, Mrs. Seth, Bloomfield Road
Blankenship, Mrs. Dale, 907 W. Cape Rock Drive
Burford, Mrs. Edwin K., 1010 Merriwether St.
Campbell, Mrs. Edward, 1100 N. Henderson St.
Chapman, Mrs. Jean Allen, 1200 Sailor Circle
Cochran, Mrs. Jo Robert, 2452 Brookwood St.
Cook, Mrs. Norman, 1611 Lacey St.
Crowe, Mrs. John, 1000 N. Henderson St.
Elrod, Mrs. Dennis, Karau Lane
Estes, Mrs. Albert, Highway 61
Hall, Mrs. Frank, Sylvan Lane
Hecker, Mrs. Joe, Highway 70W, Jackson
Herbert, Mrs. Charles, Sylvan Lane
Holcomb, Mrs. John K., 825 N. Fountain St.
Hoxworth, Mrs. Gerald, Oxford Drive
Jaeger, Mrs. Joseph, Shady Lane, Jackson
Johnson, Mrs. Earl Wayne, 1044 N. Henderson St.
Jung, Mrs. Marshall, Illmo-Scott City
Kasten, Mrs. Melvin C., 1209 Sailer Circle
Keim, Mrs. J. Harry, 643 N. West End Blvd.
Kinder, Mrs. James, 348 N. Park St.
Kratz, Mrs. Paul, 1720 Cecilia St.
Laffoon, Mrs. R. G., Illmo-Scott City
Lovinggood, Mrs. Thomas, Sylvan Lane
McDonald, Mrs. Eugene, 225 W. Main St., Jackson
McGinty, Mrs. Charles, 2310 Brookwood St.
Magaletta, Mrs. George, 957 Rodney Drive
Nunnelly, Mrs. Gordon, 1432 Themis St.
Nussbaum, Mrs. Paul, 209 Sunset Blvd.
Oehler, Mrs. William, 1617 Themis St.
Otto, Mrs. Thomas, 511 Alta Vista Ave.
Parsons, Mrs. Leroy, 1057 Dorothy St.
Rapp, Mrs. Harold, 1011 N. Henderson St.
Rawlins, Mrs. Fred, 1651 Bertling St.
Reynolds, Mrs. Garland, 537 Alta Vista Ave.
Ridings, Mrs. Harold, 96 E. Cape Rock Drive
Ritter, Mrs. Raymond, 1257 Rockwood
Seabaugh, Mrs. D. I. L., 922 W. Main St., Jackson
Seabaugh, Mrs. Loy, 334 N. Ellis St.
Seabaugh, Mrs. William, R.F.D. 2, Box 563
Shoss, Mrs. Milton, W. Cape Rock Drive
Sparkman, Mrs. Thomas, 2632 Janet St.
Terry, Mrs. James W., 1413 Margaret St.
Tribble, Mrs. Robert, Chaffee
Tygett, Mrs. Glenn, 834 Alta Vista Ave.
Tygett, Mrs. Joseph, 1877 Oak Hills Drive
Weeks, Mrs. George, 1728 Bessie St.
Williams, Mrs. W. A. Jr., 2311 Jane Drive
Wilson, Mrs. Charles, Oak Lei Drive
Wolff, Mrs. Paul, 90 E. Cape Rock Drive

CLAY COUNTY

(Kansas City)

Adams, Mrs. Howard, 819 Nashua Road, Liberty
Allain, Mrs. James, 401 W. 62 St.
Allen, Mrs. S. Lloyd, Route 6, Box 404 B, Parkville
Balhuizen, Mrs. John, 4407 N. Campbell St.
Bates, Mrs. G. Comer, 102 E. 43 St. N.
Boone, Mrs. Daniel, 5800 N. Grand St.
Bowles, Mrs. Richard, 1950 Kingshighway Blvd., Liberty
Burke, Mrs. E. K., 1 E. Briarcliff Ave.
Chastain, Mrs. Maurice W., 3 E. 47th St. N.
Chiles, Mrs. David R., Smithville
Cox, Mrs. William L., 1469 Spruce St., Liberty
Dunham, Mrs. R. H., Route 29
Dwyer, Mrs. R. D., 1000 S. Woodland Drive
Edwards, Mrs. Theodore F., 2205 E. 39th St., N.
Fakhoury, Mrs. Donald A., 4332 N. Central St.
Fischer, Mrs. Edward H., 4000 Indianola Drive
Fowler, Mrs. I. Charles, 700 E. Barnes St.
Gauer, Mrs. Robert J., 4916 N. Sherwood Dr.
Hayes, Mrs. Lawrence L., 1508 E. 51st St. N.
Hendren, Mrs. Glen W., 516 W. Franklin St., Liberty
Hobbs, Mrs. Earl B., Smithville
Hodge, Mrs. Robert H., 2214 E. 39th St. N.
Jones, Mrs. Charles E., Route 3, Liberty
Kimball, Mrs. I. W., 7306 N. W. Spring St., Parkville
King, Mrs. Phillip, 1200 Middebrook St., Liberty
Knox, Mrs. Earl R., 115 E. 43rd St. North
Kuenzi, Mrs. Donald E., 924 S. Woodland Drive
Langhus, Mrs. Melvin O., 104 W. Englewood Road
McCormick, Mrs. James E., 309 Northcrest Drive
McCracken, Mrs. S. R., 810 Old Orchard Road, Excelsior Springs
Mullins, Mrs. B. L., Route 29
Musgrave, Mrs. David E., 420 N. Kimball St., Excelsior Springs
Paker, Mrs. Robert H., 112 E. 43rd St. North
Peterson, Mrs. E. G., 6711 N. Wayne St.
Pileggi, Mrs. Felix A., 424 W. 42nd St. North 16
Revare, Mrs. Paul, 3245 Chippewa Drive
Roberts, Mrs. L. Marvin, 3906 E. 50th St. North
Schertz, Mrs. Truman B., 428 W. Briarcliff Road 16
Spelman, Mrs. Arch E., Bridge Street, Smithville
Sportsman, Mrs. Weldon L., 6309 N. Grand St.
Werner, Mrs. Dean F., 4609 N. Main St.
Werner, Mrs. Franklin C., 422 Sagamore Lane
Thurman, Mrs. H. C., 6405 Woodland Drive N. W., Parkville
Waugh, Mrs. Geo. L., 5340 Canterbury Road
Williams, Mrs. John M., 616 Ridgeway Drive, Liberty
Willoughby, Mrs. James W., 420 N. Ridge St., Liberty
Withrow, Mrs. John B., 3925 N. Main St.

COLE COUNTY

(Jefferson City)

Adams, Mrs. Charles F., 26 Hobbs Lane
Belinson, Mrs. Louis, 2008 Redwood Drive
Bowe, Mrs. Edwin E., 401 Ridgeway St.
Bregant, Mrs. Robert, 1017 Laurel St.
Cox, Mrs. William A., 206 Swift's Highway
Dorris, Mrs. Richard P., 1104 Vineyard Square
Doyle, Mrs. Matthew J., 2311 Livingston St.
Enloe, Mrs. L. David, 1200 Moreland St.
Exon, Mrs. C. Stuart, Boonville Road
Fullgrabe, Mrs. Emil A., 1602 Taylor St.
Garner, Mrs. Lynn M., 403 Meier Drive
Gordon, Mrs. James, 600 Boonville Road
Gove, Mrs. Herman S., 712 Broadway
Guhleman, Mrs. Henry V., Jr., 1710 Greenberry Road
Gurnee, Mrs. Landon H., 121 Westmore St.
Handler, Mrs. Fred P., 95 E. Circle Drive
Kanagawa, Mrs. Harold Hajime, 734 Houchin St.
Kelly, Mrs. Marshall W., 1610 Greenberry Road
Klebba, Mrs. Larry B., Hwy. 50 West
Leslie, Mrs. James P., 933 Fairmount St.
Leslie, Mrs. James T. Jr., 1427 Major Drive
Loyd, Mrs. Earl L., 114 Binder Drive
McHahey, Mrs. John W., Highway 50 West
McKnelly, Mrs. William V., 1204 Lee St.
Matthews, Mrs. John I, 1310 Moreau Drive
Meier, Mrs. Francis X., 1913 Hayselton Drive
Meinershagen, Mrs. Charles W., 138 Forest Hill
Ossman, Mrs. Julian A., 2505 W. Main St.
Russell, Mrs. Joseph P., 1517 Greenberry Road
Sanders, Mrs. Jack Shelby, 2008 Livingston Drive
Sennott, Mrs. John Stephen, 102 Douglas Drive
Shull, Mrs. G. Donald, 1925 Hayselton Drive
Stauffer, Mrs. Harry Beach, 1906 Chicago Road
Stephan, Mrs. August P., 90 W. Circle Drive
Stricker, Mrs. Harold C., 1205 Moreau Drive
Sugarbaker, Mrs. Everett D., 2113 W. Main St.
Summers, Mrs. Joseph S. Jr., 2313 W. Main St.
Tanner, Mrs. Robert H., 1606 Greenberry Road
Taylor, Mrs. Leon A., 1104 W. Main St.
Tietjen, Mrs. Fred C., Kraus Addition, Rt. 3
Watts, Mrs. Byron Edward, 2112 Forest Drive
Winegar, Mrs. Alvon C., 222 Swift's Highway

COOPER COUNTY

(Boonville)

Abele, Mrs William Arved, Krohn Drive
Avery, Mrs. Willard Bartlett, 20 Crestview Ave.
Beckett, Mrs. Theodore Cooper, 725 Fourth St.
Diekroeger, Mrs. Manuel Louis, Maplewood Farm, RFD 1
Hata, Mrs. Daikichi, 7 Morningside Drive
Humphreys, Mrs. Edward Tristran, 1123 Third St.
Stuart, Mrs. Byron McClellan, 910 Shamrock Ter.
Winn, Mrs. George Warren, 607 Poplar St.
Ziegler, Mrs. William Henry, Weyland Drive

DUNKLIN COUNTY

(Kennett)

Baldwin, Mrs. Paul, 200 W. Washington St.
Bensen, Mrs. Lee J. J., 204 Wiggs St.
Cash, Mrs. Charles R., 800 College St.
Cofer, Mrs. J. C., 404 N. Walnut St.
Croom, Mrs. D. W., 411 W. Park St., Malden
Dunmire, Mrs. George Q., 504 S. Baker Drive
English, Mrs. Wallace D., Box 67, Cardwell
Jeffe, Mrs. Erwin, Paragould, Ark.
Miltenberger, Mrs. Paul C., 705 W. Washington St.
Morehead, Mrs. William Edward, Malden
Palenske, Mrs. R. L., Box 57, Hornersville
Peck, Mrs. Chester Roehl, 234 S. Main St.
Presnell, Mrs. U. A. V., 915 S. Jackson St.
Spence, Mrs. E. L., 301 College St.
Swafford, Mrs. O. J., Main St., Senath
Tarver, Mrs. Quinton, 1004 W. Washington St.
Wilson, Mrs. Loys C., 915 S. Jackson St.
Zimmerman, Mrs. Joe A., 906 W. Washington St.

GRAND RIVER COUNTIES

(Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb Counties)

Allen, Mrs. E. Warren, 110 N. Rea St., Carrollton
Bales, Mrs. Eugene, 502 W. 3rd Terrace, Carrollton
Bohnsack, Mrs. Ralph, 1017 Brookfield Ave., Brookfield
Clark, Mrs. Chester, 13 Town & Country, Trenton
Conrad, Mrs. Joseph, 1202 Jackson St., Chillicothe
Craig, Mrs. Paul Todd, Carrollton
Cross, Mrs. Albert, 902 W. 17th St., Trenton
Cullers, Mrs. Charles, 205 W. 12th St., Trenton

Daley, Mrs. Frank, 508 E. Samuel St., Hamilton
Dixon, Mrs. John, 1005 Brookfield Ave., Brookfield
Dowell, Mrs. Donald, 1830 Calhoun St., Chillicothe
Duffy, Mrs. Oliver, R. R. No. 1, Trenton
Ellsworth, Mrs. Willard, Cainsville
Fair, Mrs. William, 1705 Calhoun St., Chillicothe
Fuson, Mrs. William, 520 Pleasant View, Trenton
Gale, Mrs. Joseph, 1710 Polk St., Chillicothe
Gary, Mrs. George, 112 W. Houser St., Marceline
Gentry, Mrs. M. L., 1710 Borden St., Chillicothe
Horner, Mrs. Glennon, W. Walker St., Marceline
Howell, Mrs. Billy, 416 Shelby St., Brookfield
Magill, Mrs. Joseph, 523 Baker Ave., Milan
Mairs, (Edgar) Miss Catherine, 412 E. 7th St., Trenton
Mandler, Mrs. George, 1616 Clay St., Chillicothe
Platz, Mrs. John, 804 N. Main St., Carrollton
Smith, Mrs. Robert, 509 E. Houser St., Marceline
Sweiger, Mrs. James, Maysville
Vandiver, Mrs. V. D., 1836 Polk St., Chillicothe
Vinyard, Mrs. Jack, R.F.D., Carrollton

GREENE COUNTY
(Springfield)

Allen, Mrs. Jerry H., 1324 S. Fairway Ave.
Allison, Mrs. James B., 1860 E. Glenwood St.
Anthony, Mrs. Dallas D., 1322 S. Pickwick St.
Ash, Mrs. Charles J., 743 Riverside Drive
Ashley, Mrs. Thomas E., 2740 Pythian St.
Atkinson, Mrs. Thomas E., Rt. 9
Auner, Mrs. Cecil R., 649 McCann St.
Baldwin, Mrs. Richard M., 2033 Prairie Lane
Baries, Mrs. Robert, Marshfield
Bonebrake, Mrs. MacDonald D., 1443 S. Delaware St.
Brown, Mrs. Alex L., 2424 Sheridan St.
Brown, Mrs. Lyman, 1410 N. Rogers St.
Burkey, Mrs. Jordon W., 2405 Sheridan St.
Busiek, Mrs. Paul J., RFD 9
Busiek, Mrs. Urban J., 1635 E. Walnut St.
Callaway, Mrs. Guy Jr., 901 E. Portland St.
Cheek, Mrs. W. Carey, 1534 East Meadowmere
Christy, Mrs. Raymond A., 2868 Eastmore St.
Clarke, Mrs. Michael J., 2416 Brentwood St.
Clary, Mrs. Wm. W., 2259 Maribeau St.
Clawson, Mrs. James W., 2305 E. Latoka St.
Clayton, Mrs. Edgar L., 2446 Brentwood St.
Cochran, Mrs. Thomas E. Jr., 2423 Brentwood St.
Coller, Mrs. Frederick B., 2433 Marlan St.
Conrad, Mrs. Raymond C., 1338 S. Delaware St.
Crawford, Mrs. Oral B., Rt. 1
Cunningham, Mrs. Darral D., 1425 S. Delaware St.
Delzell, Mrs. William A., RFD 1, Willard
Dietz, Mrs. M. Wendell, 2540 Edgewater St.
Dolan, Mrs. Daniel L., 2300 Maryland St.
Dunaway, Mrs. D. A., U. S. Medical Center
Duncan, Mrs. Robert D., 1234 E. Loren St.
Eastwood, Mrs. Robert A., 1934 Rosebrier St.
Elkins, Mrs. Ronald F., 2830 E. Glenwood St.
Ellis, Mrs. Francis J., 2235 E. Glenwood St.
Evans, Mrs. Ezra L. Jr., 1260 E. Catalpa St.
Farthing, Mrs. F. R., 1234 E. Walnut St.
Farthing, Mrs. Gene W., 1235 E. Walnut St.
Ferguson, Mrs. John P., 1219 S. Clay St.
Ferrell, Mrs. Thomas E. Jr., 1525 E. Meadowmere
Fessenden, Mrs. Ersel M., 634 E. Kingsbury St.
Francis, Mrs. William C., 2820 E. Glenwood St.
German, Mrs. Walter A. Jr., 2659 Luster St.
Giddings, Mrs. Frank C., 1211 S. Pickwick St.
Gorelick, Mrs. David F., 1041 Linwood Ter.
Gose, Mrs. Don F., 1339 S. Delaware St.
Griot, Mrs. Mary J., 1640 E. Sunshine St.
Hahn, Mrs. Andrew L., 2639 S. Luster St.
Hall, Mrs. David W., Wayland
Hall, Mrs. Durward G., 2442 S. Fremont St.
Hanan, Mrs. Ernest B., 724 E. Kingsbury St.
Hanss, Mrs. Armand W., RFD 9
Harris, Mrs. Jesse, Medical Center
Hartley, Mrs. L. Howard, 1550 E. Sunshine St.
Harvey, Mrs. Harold D., 2531 Brentwood St.
H'Doubler, Mrs. Alice, RFD 7
H'Doubler, Mrs. Charles E., 2180 Barataria St.
H'Doubler, Mrs. F. T. Jr., 2336 E. Glenwood St.
H'Doubler, Mrs. Peter B., 1560 S. Delaware St.
Hermance, Mrs. William E., U. S. Medical Center
Hollis, Mrs. Richard, 2178 Catalina St.
Holmes, Mrs. Daniel E., 2115 S. Cedarbrook St.
Horton, Mrs. James D., 1235 E. Delmar St.
Hulstra, Mrs. Han F. W., 2333 Langston St.
Ivy, Mrs. H. Barry, 215 E. Sunshine St.
Jameson, Mrs. James E., 1210 S. Weller St.
Johnson, Mrs. George A., 2734 Luster St.
Johnson, Mrs. Warford B., 2244 Edgewood St.
Johnson, Mrs. William F., 973 E. Linwood Drive
Johnston, Mrs. Joseph L., 2855 Southern Hills Ave.
Jorel, Mrs. Louis E., 1822 S. National St.
Key, Mrs. James S., 2278 Englewood St.
Klingner, Mrs. George M., Turners
Knabb, Mrs. Henry F. Jr., RFD 12
Knabb, Mrs. Kenneth E., 1229 E. Catalpa St.
Kolze, Mrs. Vernon W., 1854 Valleyroad Ave.
Koon, Mrs. Ben H., Bolivar
Langston, Mrs. W. Roland, 1453 S. Fairway Ave.
Lemmon, Mrs. G. Bruce Jr., 1462 Virginia St.
Lewis, Mrs. Noel Rex, 2205 Glendale St.
Litton, Mrs. Lyle D., 3044 Shalimar St.
Lockhart, Mrs. Charles E., 1600 E. Catalpa St.
Lorenc, Mrs. Ernest, 2454 Luster St.
Lowe, Mrs. Horace A. Jr.,1700 E. Walnut St.
Luri, Mrs. Harry H.. 2433 Langston St.
McAlhany, Mrs. Howard J., 1643 E. Catalpa St.
McCraw, Mrs. Doyle C., Bolivar
McKinsey, Mrs. John J., Professional Bldg.
Maddux, Mrs. William Paul, 1000 S. Pickwick St.
Maher, Mrs. Robert W., 1350 E. Delmar St.
Maple, Mrs. Francis M., 2230 Maribeau St.
Maples, Mrs. Floyd H.. 1923 Ventura St.
Milofsky, Mrs. Allan H., 1519 E. Berkeley St.
Moore, Mrs. DeArmond, U. S. Medical Center
Moseley, Mrs. F. Thomas, 2837 Lomita Circle
Napper, Mrs. Marvin L., Rt. 1, Ash Grove
Neu, Mrs. Leo T., Jr., 3008 Carlisle Circle
Palcheff, Mrs. Chris L., Route 9
Parks, Mrs. William I. Jr., 815 E. Portland St.
Penninger, Mrs. William H., 2246 Claiborne St.
Peterson, Mrs. Stanley S., 721 E. Stanford St.
Plumlee, Mrs. William C., 919 E. Walnut St.
Podrecca, Mrs. Guido I., Brentwood St.
Polk, Mrs. John W., 1463 E. Meadowmere
Powell, Mrs. Edwin M., 1226 S. Weller St.
Prater, Mrs. Bill George, 3000 Carlisle Circle
Pruett, Mrs. Paul L., 1036 E. Sunshine St.
Roper, Mrs. Stanley D., Ozark
Rosen, Mrs. C. Max, Professional Bldg.
Sala, Mrs. Jose M., 1423 N. Jefferson St.
Scanlon, Mrs. Robert C., 2429 Kings St.
Schroff, Mrs. Carle H., 2448 E. Broadmoor St.
Schwartz, Mrs. Eugene J., 1315 E. Loren St.
Schweitzer, Mrs. Fred C. Jr., 2550 Luster St.
Sewell, Mrs. Walter S., 2707 S. Marlan St.
Shackter, Mrs. I. Bruce, 1550 E. Sunshine St.
Siceluff, Mrs. Joseph G., Rt. 9
Silsby, Mrs. Don J., 932 S. Pickwick St.
Silsby, Mrs. Harry D., 1369 S. Fairway St.
Simpson, Mrs. Albert P., 2202 Barataria St.
Simpson, Mrs. E. L., 1023 E. Portland St.
Smith, Mrs. Carl L., (Query) address
Snead, Mrs. William H. Jr., 2532 Sheridan St.
Stewart, Mrs. Robert B., 2360 E. Grand St.
Stewart, Mrs. R. Wendell, 2028 Windsor St.
Stufflebaum, Mrs. Robert E., 2248 Maribeau St.
Sturtevant, Mrs. Harwood N., 956 S. Fremont St.
Tarrasch, Mrs. Ernest L., 2114 Langston St.
Thomasson, Mrs. David D., 2311 E. Glenwood St.
Tillman, Mrs. Walter W. Jr., 1220 E. Loren St.
Tombridge, Mrs. T. L., 2113 Meadowview St.
Trotter, Mrs. W. Yates, 910 E. University St.
Turner, Mrs. Glenn O., 1462 S. Dollison St.
Upshaw, Mrs. Paul D., 2222 Inglewood St.
Vail, Mrs. A. Denton, 1307 E. Catalpa St.
Wakeman, Mrs. J. N., 1402 E. Meadowmere
Walker, Mrs. William M., 1930 Arcadia St.
Warres, Mrs. Herbert L., 1636 S. Glenstone St.
Waterfield, Mrs. Jim R., 2831 Stewart St.
Webb, Mrs. L. Richard, 1243 E. Loren St.
Williams, Mrs. John Westerfield, 2245 Fritts St.
Wilson, Mrs. Roy E., 2160 Barataria St.
Wise, Mrs. Gordon F., 2850 Southern Hills
Wittmer, Mrs. Samuel C., 2314 E. Washita St.
Wood, Mrs. William W., 1854 E. Berkeley St.
Wooldridge, Mrs. Wilfred E., 1126 E. Stanford St.
Yancey, Mrs. Daniel L., 1133 S. Weller St.

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(Kansas City)

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Adelman, Mrs. Arthur, 333 Meyer Blvd. 13
Agee, Mrs. Loren Glenn, 1101 E. 110th St. 31
Ake, Mrs. Daniel, 6009 W. 99th St., Shawnee Mission, Kan.
Allebach, Mrs. Hobart K. B., 3810 W. 65th Ter., Shawnee Mission, Kan.
Allen, Mrs. Charles H., 616 W. Maple St., Independence
Allen, Mrs. William Bayne, 2801 W. 63rd St., Shawnee Mission, Kan.
Altringer, Mrs. Arthur N., 5630 Mission Drive, Shawnee Mission, Kan.
Anderson, Mrs. Raymond B., 6024 State Line 13
Anderson, Mrs. Richard W., 1001 Romany Road 13
Andrus, Mrs. Bailey C., 6508 Overbrook Road, Shawnee Mission, Kan.
Arms, Mrs. Arnold V., 6421 High Drive, Shawnee Mission, Kan.
Aschmann, Mrs. T. H., 8740 Brooklyn St. 30
Asher, Mrs. A. Graham, 5410 State Line, Shawnee Mission, Kan.
Atcheson, Mrs. Bellfield, 6524 Overhill Road, Shawnee Mission, Kan.
Atwell, Mrs. Floyd C., 630 W. 60th Ter. 13
Averill, Mrs. Keith H., 9616 Riggs St., Overland Park, Kan.
Ayres, Mrs. Samuel, 305 W. 51st Ter. 12
Bachman, Mrs. Paul L., 1206 W. Truman Road, Independence
Baer, Mrs. Alvin J., 5800 Howe Drive, Shawnee Mission, Kan.
Baker, Mrs. Philip J., 11440 East 47th St. 33

Ballard, Mrs. V. Bryce, 4408 W. 74th Ter., Prairie Village, Kan.
Bare, Mrs. Chester I., 10501 E. 78th Ter. 33
Barelli, Mrs. Pat A., 5609 Mission Drive, Shawnee Mission, Kan.
Barnard, Mrs. John L., 444 W. 67th St. 13
Barnes, Mrs. Robert H., 6714 Kenwood Ave. 31
Barnett, Mrs. Gordon P., 6568 High Drive, Shawnee Mission, Kan.
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Barry, Mrs. William B., 4600 Nichols Parkway 12
Bay, Mrs. Merrill R., Woods Chapel Road, Blue Springs
Becker, Mrs. R. R., 5622 Holmes St. 10
Becker, Mrs. Rolfe A., 5808 W. 94th Ter., Overland Park, Kan.
Bennett, Mrs. J. D., 3216 W. 69th St., Shawnee Mission, Kan.
Benoit, Mrs. Hector W., Jr., 2501 W. 64th St., Shawnee Mission, Kan.
Berenson, Mrs. Sheldon E., 832 W. 63rd St. 13
Bernreiter, Mrs. Michael, 1246 W. 63rd St. 13
Berry, Mrs. G. Neill, 1025 W. 62nd St. 13
Berry, Mrs. Maxwell G., 5020 Summit St. 12
Bikales, Mrs. Victor W., 5810 High Drive, Prairie Village, Kan.
Bills, Mrs. Marvin L., 3309 W. 68th St., Shawnee Mission, Kan.
Black, Mrs. Don A., 2700 W. 67th St., Prairie Village, Kan.
Black, Mrs. Eugene C., 3201 W. 67th St., Shawnee Mission, Kan.
Blim, Mrs. Richard Don, 3204 W. 71st St., Prairie Village, Kan.
Bohan, Mrs. Peter T., 4545 Wornall Road 11
Bolin, Mrs. N. Venay, 5720 Howe Drive, Shawnee Mission, Kan.
Bordy, Mrs. Marvin D., 8710 Belleview Drive 14
Botwin, Mrs. Arnold E., 6010 Cherokee Drive, Mission, Kan.
Boughnou, Mrs. Harvey, 660 W. 61st Ter.
Bourke, Mrs. Timothy S., 601 E. Meyer Blvd. 31
Bowser, Mrs. John F., 3701 Madison St. 11
Brams, Mrs. Jack B., 5050 Oak St. 12
Braverman, Mrs. Abe Elliott, 611 E. 109th Ter. 31
Bridgens, Mrs. James G., 1025 Huntington Road 13
Brown, Mrs. Adrian J., 12 E. 63rd St. 13
Brown, Mrs. Irwin S., 3301 W. 68th St., Shawnee Mission, Kan.
Brown, Mrs. William R., 8124 Lee Blvd., Shawnee Mission, Kan.
Bruner, Mrs. Robert E., 912 Valentine Road 11
Brust, Mrs. Carl H., 6114 Howe Drive, Mission, Kan.
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Budke, Mrs. Harold A., 1219 W. 66th Ter. 13
Buhler, Mrs. Victor B., 5112 Bellview Road 12
Buie, Mrs. Bruce R., 4601 E. 110th St. 37
Bunting, Mrs. Williston P., 1231 W. 62nd St. 13
Butcher, Mrs. Robert W., 1101 W. 86th Ter. 14
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Caffrey, Mrs. Raymond J., 1314 W. Red Bridge Road 14
Caldwell, Mrs. John K., 436 E. 65th Ter. 31
Campbell, Mrs. Frederick B., 1032 W. 55th St. 13
Campbell, Mrs. John G., 827 W. 60th Ter. 13
Carlson, Mrs. Hjalmar E., 2025 W. 48th Ter., Shawnee Mission, Kan.
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Casady, Mrs. Gilbert N., 9830 Aberdeen Drive, Shawnee Mission, Kan.
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Chambers, Mrs. James Q. Jr., 5500 Belinder Road, Shawnee Mission, Kan.
Chapman, Mrs. Arthur H., 1020 W. 70th Ter. 13
Cheeseman, Mrs. William B., 5302 W. 79th Ter., Prairie Village, Kan.
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Cochrane, Mrs. Joseph J., 9615 Grandview Road 37
Cockerell, Mrs. Sanford F., 3501 S. Crysler St., Independence
Coffey, Mrs. Ralph R., 814 Rockwell Lane 12
Cohen, Mrs. Harry K., 417 W. 70th St. 13
Cohen, Mrs. Hilliard, 1291 W. 72nd Ter. 14
Connell, Mrs. Evan S., 837 W. 58th Ter. 12
Cooper, Mrs. Charles S., 1035 W. Meyer Circle
Cox, Mrs. Kenneth E., 5640 Pembroke Lane, Prairie Village, Kan.
Crockett, Mrs. James, 5400 W. 83rd St., Prairie Village, Kan.
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Culbertson, Mrs. William F., 1253 Huntington Road 13
Curran, Mrs. Desmond, 6626 Wenonga Ter., Prairie Village, Kan.
Curts, Mrs. Calvin J., 7419 Terrace 14
Dann, Mrs. David S., 1215 W. 67th St. 13
Davis, Mrs. Donald R., 4320 Wornall Road 11
Davis, Mrs. Herbert V., 4601 Holmes St. 10
Davis, Mrs. Jack M., 7110 Harecliff Drive 33
Davis, Mrs. Robert C., 659 W. 61st Ter. 13
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Dorsch, Mrs. E. H., 3516 Claremont St., Independence
Downey, Mrs. James W., 2400 W. 51st Ter., Shawnee Mission, Kan.
Drake, Mrs. Roy F., 6600 Outlook, Shawnee Mission, Kan.
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Duncan, Mrs. Wm. H. Sr., 501 Porte Cimi Pas 10
Duncan, Mrs. Wm. H. Jr., 808 W. 69th St. 13
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Elliott, Mrs. B. Landis, 4712 Roanoke Parkway 12
Elliott, Mrs. R. Glenn, 6136 Reinhardt Drive, Shawnee Mission, Kan.
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Engelking, Mrs. David, 10508 E. 60th Ter. 33
Eshelman, Mrs. Albert D., 12116 E. 46th St. 33
Etzenhouser, Mrs. Merrill, 1215 W. 35th Ter., Independence
Etzenhouser, Mrs. Russell D., 1317 W. College St., Independence
Eubank, Mrs. Dillard M., 6020 Elm St. 33
Eubank, Mrs. Will R., 6113 Lane 33
Eubank, Mrs. William Y., 6411 Morningside Drive 13
Farley, Mrs. Claude C., 5112 W. 69th Ter., Prairie Village, Kan.
Farney, Mrs. Jacob P., 2721 W. 69th St., Shawnee Mission, Kan.
Farnsworth, Mrs. Jesse J., 5608 Fairway St., Shawnee Mission, Kan.
Feierabend, Mrs. Frank L., 345 Wyoming St. 14
Feist, Mrs. George V., 1103 W. 86th Ter. 74
Ferguson, Mrs. Eugene H., 333 Meyer Blvd., Apt. 504 13
Ferguson, Mrs. James T., 718 E. Armour Blvd. 9
Ferris, Mrs. Carl R., 629 W. 70th Ter. 13
Finkle, Mrs. Robert H., 9507 E. 80th Ter., Raytown 33
Fitzgerald, Mrs. Robert H., 2700 W. 69th St., Shawnee Mission, Kan.
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Forman, Mrs. Louis H., 2801 W. 67th St., Shawnee Mission, Kan.
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Fouts, Mrs. Dallas Sr., 13101 E. 43rd St., Independence
Fowler, Mrs. Fred D., 4911 Pawnee Drive, Shawnee Mission, Kan.
Fowler, Mrs. James W., 200 W. 53rd Ter. 12
Francisco, Mrs. Clarence B., 3621 Wyncote Lane, Shawnee Mission, Kan.
Fredeen, Mrs. Robert C., 5437 Canterbury Road, Shawnee Mission, Kan.
Frick, Mrs. J. Paul, 116 Huntington Road 13
Friedman, Mrs. Morris L., 2516 W. 69th St., Shawnee Mission, Kan.
Fritzlen, Mrs. Thomas J., 6848 Locust St. 31
Fuhrman, Mrs. Donald L., 3417 W. 68th St., Prairie Village, Kan.
Fulton, Mrs. Albert E., 9501 Madison Ave. 15
Fury, Mrs. Tex E., 642 Huntington Road 13
Gainey, Mrs. Harold L., 6438 Indian Lane, Shawnee Mission, Kan.
Ganley, Mrs. Wm. Coyle, 8400 Overhill Drive 38
Gard, Mrs. Raymond F., 11530 Winner Road, Independence
Garrison, Mrs. Roy F., 404 W. 67th Ter. 13
Geha, Mrs. Braham J., 9814 Lee Blvd., Leawood, Kan.
Gestring, Mrs. Hugh A., 3915 W. 90th Ter., Shawnee Mission, Kan.
Gibson, Mrs. David M., 5318 Sunset Drive 12
Gilkey, Mrs. Harry M., 4941 Westwood Road 12
Gillmor, Mrs. C. Stewart, 420 E. Armour Blvd. 9
Ginsberg, Mrs. Norman A., 1220 W. 67th St. 13
Gist, Mrs. W. W., 1208 W. 59th St. 13
Givertz, Mrs. Bernard, 6501 Johnson Drive, Shawnee Mission, Kan.
Goldman, Mrs. Stanley, 5734 Windsor Drive, Mission, Kan.
Goldsich, Mrs. Edward, 5515 W. 81st St., Prairie Village, Kan.
Goldstein, Mrs. Marvin F., 400 E. 91st St.
Goodman, Mrs. Leroy, 2119 W. 70th Ter., Shawnee Mission, Kan.
Goodson, Mrs. W. H. Jr., 46 E. 54th St. 12
Goolsbee, Mrs. Robert, 6438 Sagamore St., Shawnee Mission, Kan.
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Graham, Mrs. Wallace H., 5157 Ward Parkway 12
Green, Mrs. John R., 3424 Norton St., Independence
Green, Mrs. John Richard, 1107 Appleton St., Independence
Greene, Mrs. W. Wallace, 2008 W. 68th St., Shawnee Mission, Kan.
Griffith, Mrs. George W., 4010 Harrison St. 10
Griffith, Mrs. John A. Jr., 6500 Granada Drive, Shawnee Mission, Kan.
Growdon, Mrs. John A., 1207 Stratford Road 13
Gundle, Mrs. Sigmund, 5926 Windsor Drive, Mission, Kan.
Haight, Mrs. John M., 5609 Blue Ridge Blvd. 33
Hall, Mrs. Thomas B., 4550 Warwick Blvd., Apt. 504, 11
Halperin, Mrs. Phillip H., 1011 W. 56th St. 13
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Hamill, Mrs. Robert W., 6945 Nieman Road, Shawnee Mission, Kan.

Harless, Mrs. Morris S., 6844 Cherry St. 31
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Hausheer, Mrs. Herman, 1804 S. Dodgion St., Independence
Haynes, Mrs. Solon E., 5306 Holmes St. 10
Heller, Mrs. B. Marcus, 627 W. 68th Ter. 13
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Henry, Mrs. S. David, Rt. No. 2, Quivira Lake 6
Herrman, Mrs. George V., 8331 Maple Lane, Overland Park, Kan.
Hess, Mrs. Paul D., 8423 High Drive, Leawood, Kan.
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Hickerson, Mrs. William H., 4207 S. Crysler St., Independence
Hill, Mrs. J. H., 8115 Meadow Lane, Leawood, Kan.
Hink, Mrs. Fred W., 524 Hardy St., Independence
Hoadley, Mrs. William D., 3009 W. 48th Ter., Shawnee Mission, Kan.
Hodgson, Mrs. Frank H., 1049 W. 55th St. 13
Hoeper, Mrs. Samuel D., 13009 12th St., Grandview
Hoffman, Mrs. J. S., 5820 Cherokee Drive, Shawnee Mission, Kan.
Hoffman, Mrs. R. Lee, 6533 Rainbow Ave., Prairie Village, Kan.
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Hollweg, Mrs. Kenneth C., 808 W. Meyer Blvd. 13
Holton, Mrs. Edward B., 2817 Westport Road, Independence
Hook, Mrs. Waller G., 9238 State Line, Leawood, Kan.
Howard, Mrs. Joseph W., 6026 McGee St. 13
Hungate, Mrs. Carroll P., 6845 Oak St. 13
Hunt, Mrs. Claude J., 615 W. 56th St. 13
Hunter, Mrs. Martin P., 6532 Belinder St., Shawnee Mission, Kan.
Hunzicker, Mrs. Warren J., 1248 Stratford Road 13
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Jackson, Mrs. Jabez N., 4600 Nichols Pkwy. 12
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Jacobs, Mrs. Walter Harvey, 6656 Milhaven Drive, Shawnee Mission, Kan.
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Jansen, Mrs. Robert, 440 E. 66th St. 31
Jarvis, Mrs. James A., 600 W. 57th St. 13
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Johnstone, Mrs. Paul N., 117 W. 69th Ter. 13
Jonas, Mrs. Harry S., 11711 Markham Road, Independence
Jones, Mrs. T. Reid, 5927 Lockton Lane, Shawnee Mission, Kan.
Justus, Mrs. John B., 5221 Howe Drive, Shawnee Mission, Kan.
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Kendall, Mrs. Charles A., 658 Red Road, Independence
Kennard, Mrs. G. Keith, 3658 Madison St. 11
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Ketcham, Mrs. William Merritt, 429 E. Meyer Blvd. 31
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Klein, Mrs. E. H., 7011 Roe St., Prairie Village, Kan.
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Lally, Mrs. James J., 800 W. 52nd Ter. 12
Lamar, Mrs. Frederick C., 803 W. 48th St. Apt. 12, 12
Lamar, Mrs. Robert F., 800 W. 53rd Ter. 12
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Lapp, Mrs. Harry C., 5235 Rockhill Road 10
Latham, Mrs. Raymond W., 3008 W. 67th St., Shawnee Mission, Kan.
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Long, Mrs. R. Stacy, 3343 Blue Ridge Blvd., Independence
Lowell, Mrs. Paul, 4742 Liberty St. 12
Lyddon, Mrs. Harold R. Jr., 1221 W. 67th St. 13
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McConchie, Mrs. James E., 2719 S. Crysler St., Independence
McCoy, Mrs. Fred, 5720 Foster St., Shawnee Mission, Kan.
McCubbin, Mrs. C. Roy, 4550 Warwick Blvd. 9
McCunniff, Mrs. William B., 3719 Jarboe St. 11
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McLeod, Mrs. John, 9 E. 67th St. 13
McMillan, Mrs. Thomas E., 3409 W. 68th St., Shawnee Mission, Kan.
McVay, Mrs. James R. Jr., 1233 W. 63rd Ter. 13
Mangels, Mrs. Kenneth A., 1102 W. 36th Ter., Independence
Mantz, Mrs. Herbert L., 1209 Romany Road 13
Marks, Mrs. Mark M., 6537 Summit St. 13
Marshall, Mrs. C. F., 2500 W. 65th St., Shawnee Mission, Kan.
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Mayer, Mrs. John H., Jr., 829 W. 55th St. 13
Melgaard, Mrs. S. Ross, 1012 W. 61st Ter. 31
Meyer, Paul W., 5160 Sunset Drive 12
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Miller, Mrs. Gerald L., 836 W. 51st St. 12
Miller, Mrs. Max I., 4001 W. 66th St., Prairie Village, Kan.
Miller, Mrs. Wade H., 4550 Warwick Blvd., Apt. 508
Miller, Mrs. Wilson Herrick, 6400 Verona Road, Shawnee Mission, Kan.
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Morris, Mrs. Joseph H., 5017 George St. 33
Morrow, Mrs. Raymond L., 17 W. 69th St. 13
Moss, Mrs. Paul, 420 E. 64th Ter. 31
Mosser, Mrs. Robert S., 3114 S. Norton St., Independence
Mueller, Mrs. M. J., 6441 Holmes St. 31
Mullen, Mrs. Leo M., 4443 Paseo Blvd. 10
Murphy, Mrs. Edward S., 421 W. 68th St. 13
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Myers, Mrs. Robert M., 804 W. 65th St. 13
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Nickson, Mrs. Charles E. Jr., 4425 Larson St. 33
Nigro, Mrs. E. Robert, 1047 W. 53rd Ter. 12
Noltensmeyer, Mrs. Milton, 3305 W. 50th Ter., Shawnee Mission, Kan.
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Overesch, Mrs. Harry B., 6215 Ensley Lane, Shawnee Mission, Kan.
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Pipkin, Mrs. Garrett, 5427 Baltimore St. 12
Pollock, Mrs. Leo H., 6601 Wenonga Ter., Shawnee Mission, Kan.
Pope, Mrs. Charles H. Jr., 14401 E. 40th St., Independence
Porter, Mrs. Louis, 6017 McGee St. 13
Potts, Mrs. Donald, 18508 E. 30th Ter., Independence
Powers, Mrs. John M., 3838 Blue Ridge Blvd., Independence
Preston, Mrs. Albert Jr., 606 W. Meyer Blvd. 13
Printz, Mrs. Joseph H., 820 W. 64th Ter. 13
Pugh, Mrs. Richard George, 600 Dickinson Road, Independence
Quer, Mrs. Erich A., 6820 Tomahawk Road, Shawnee Mission, Kan.
Quistgard, Mrs. Paul C., 7300 Manchester St., 33
Raich, Mrs. Robert A., 828 Greenway Ter. 13
Ramey, Mrs. Ehret O., 8907 Belleview St. 14
Rector, Mrs. Joe Lee Jr., 5323 Fairway Road, Shawnee Mission, Kan.
Reinhardt, Mrs. G. Robert, 600 E. 66th St. 10
Rhoades, Mrs. Arthur, 110th & Antioch Rd., Box 292, Lenexa, Kan.
Riley, Mrs. J. Patrick Jr., 214 E. Armour Blvd. 11
Riller, Mrs. L. E., 3724 Holmes St. 9
Rinkel, Mrs. Marie Thiessen, 6405 Sagamore Road, Shawnee Mission, Kan.
Roberts, Mrs. Harold M., 1005 Brentwood Circle 12
Roberts, Mrs. Sam E., 5964 Overhill Road, Shawnee Mission, Kan.
Robinson, Mrs. Arthur W., 6600 Wenonga Road, Shawnee Mission, Kan.
Robinson, Mrs. Ernest Kip, 1015 W. 58th Ter. 13
Robinson, Mrs. William J., 9931 Lee Circle, Shawnee Mission, Kan.
Robison, Mrs. James Travis Jr., 4203 92nd Ter., Shawnee Mission, Kan.
Rodgers, Mrs. George G., 6305 N. Woodland St. 18
Rubin, Mrs. Sidney, 1287 West 72nd St. 14
Rubnitz, Mrs. Leon H., 210 W. 94th St. 14
Saferstein, Mrs. A. Lester, 6859 Cherry St. 31
Sanders, Mrs. Clarence E., 4700 Roanoke Parkway 12
Sanders, Mrs. Donald, 9015 Main St.
Sanders, Mrs. William F., 1004 W. 66th Ter. 13
Sauer, Mrs. Gordon C., 830 W. 58th Ter.
Saunders, Mrs. Everett L., 3839 S. Crysler St., Independence
Schaerrer, Mrs. W. C., 5245 Mercier St. 12
Schiffmacher, Mrs. Jack E., 4517 W. 65th St., Prairie Village, Kan.
Schorer, Mrs. Edwin Henry, 221 W. 48th St.
Schottman, Mrs. Gerhard W. Jr., 5902 W. 77th Ter., Prairie Village, Kan.
Schutz, Mrs. Richard B., 3913 W. 57th Ter., Shawnee Mission, Kan.
Seeley, Mrs. Clark W., 3000 W. 68th St., Shawnee Mission, Kan.
Seely, Mrs. Bradford, 520 Dickinson Road, Independence
Shapiro, Mrs. L. M., 6429 Holmes St.
Shelden, Mrs. Russell D., 816 W. 58th Ter. 13
Shifrin, Mrs. Alexander, 6824 Holmes St.
Shireman, Mrs. Kenneth L., 4415 Sunrise Drive 23
Shuey, Mrs. Herbert H., 933 E. 77th Ter. 31
Shumate, Mrs. D. L., 3703 Penn St. 11
Shypper, Mrs. M. J., 4738 Oak St. 12
Simon, Mrs. Sanford, 8129 Rosewood Road, Shawnee Mission, Kan.
Sinclair, Mrs. Alexander B. Jr., 211 W. Concord Ave. 12
Singleton, Mrs. J. Milton, 4618 Warwick Blvd. 12
Skillman, Mrs. Robert K., 10335 High Drive, Shawnee Mission, Kan.
Skinner, Mrs. John O., 5108 Grand Ave. 12
Skinner, Mrs. John T., 824 Westover Road 13
Slentz, Mrs. Edwin L., 4812 W. 66th Ter., Shawnee Mission, Kan.
Slentz, Mrs. William A., 441 W. 59th Ter. 13
Slickman, Mrs. Robert A., 4937 Wyoming St. 12
Smith, Mrs. Arthur B., 10130 Pawnee Lane, Leawood, Kan.
Smith, Mrs. Dale C., 5212 Reinhardt Ave., Shawnee Mission, Kan.
Smith, Mrs. Ira T., 3900 W. 90th Ter., Shawnee Mission, Kan.
Smith, Mrs. Wallace B., 3409 S. Leslie, Independence
Sneid, Mrs. Philip, 4201 W. 90th Ter., Overland Park, Kan.
Snider, Mrs. Sam H., 722 Ward Parkway 12
Snider, Mrs. W. Ray, 4416 S. Union St., Independence
Spafford, Mrs. Allen L., 5552 Belinder Ave., Shawnee Mission, Kan.
Spurny, Mrs. Otto M., 10 E. 68th Ter. 13
Stacey, Mrs. Wallace R., 3407 Shady Bend Drive, Independence
Staggs, Mrs. William A., 641 E. 45th St. 10
Staley, Mrs. Harry R., 5028 Sunset Drive 12
Statland, Mrs. Harry, 1016 W. 69th Ter. 13
Steffen, Mrs. L. F., 5521 Crestwood Drive 10
Stelle, Mrs. Charles W., 7549 Wyoming St. 14
Stelmach, Mrs. W. Jack, 6100 Morningside Drive 13
Stockton, Mrs. Raymond W., 5215 W. 81st St., Prairie Village, Kan.
Stockwell, Mrs. A. Lloyd, 5736 Windsor Drive, Shawnee Mission, Kan.
Stratemeier, Mrs. Edward H. Jr., 9728 High Drive, Leawood, Kan.
Stribling, Mrs. Thomas L., 5006 George St. 33
Summers, Mrs. Caldwell B., 7312 Jarboe St., 14
Sutton, Mrs. Richard L. Jr., 5400 Ward Parkway 12
Swisher, Mrs. Robert C., 6034 Lockton Lane, Shawnee Mission, Kan.
Szabados, Mrs. Ernest D., 1901 S. Leslie St., Independence
Tarson, Mrs. Solomon S., 837 W. Gregory Blvd. 14
Tasker, Mrs. Charles B., 2721 W. 67th Ter., Shawnee Mission, Kan.
Terrill, Mrs. Robert S., 10223 Lee Blvd., Leawood, Kan.
Thiele, Mrs. George H., 6526 High Drive, Shawnee Mission, Kan.
Thomas, Mrs. Christopher Y. Jr., 4206 Homestead Drive, Prairie Village, Kan.
Thompson, Mrs. Charles L., 1256 W. 61st Ter. 13
Thorn, Mrs. Druery R., 8200 Ensley Lane, Leawood, Kan.
Tice, Mrs. Wayne K., 1915 Lake Drive, Independence
Trippe, Mrs. Harrison C., 8511 Lee Blvd., Leawood, Kan.
Trowbridge, Mrs. E. H. Jr., 6436 High Drive, Shawnee Mission, Kan.
Tutera, Mrs. D. F., 1260 W. 63rd Ter. 13
Twin, Mrs. Edward, 2921 W. 67th Ter., Shawnee Mission, Kan.
Twyman, Mrs. Richard A., 1020 W. 56th St. 13
Underwood, Mrs. Dick Holland, 2008 W. 95th St., Leawood, Kan.
Underwood, Mrs. Ross H., 5522 Aberdeen Rd., Shawnee Mission, Kan.
Unger, Mrs. Harold, 400 W. 68th St. 13
Valentine, Mrs. Herbert S., 1020 W. 69th St. 13
Van Biber, Mrs. James T., 3705 Northern Blvd., Independence
Van Buskirk, Mrs. William C., 1909 W. 67th St., Shawnee Mission, Kan.
Van Del, Mrs. Dwight T., 6737 Rockhill Road 31
Vaughn, Mrs. James W., 2804 W. 77th, Prairie Village, Kan.
Vilmer, Mrs. Charles E., 3016 W. 67th St., Shawnee Mission, Kan.
Vincent, Mrs. Jack C., 2003 W. 67th Ter., Shawnee Mission, Kan.
Virden, Mrs. Herbert H., 6533 High Drive, Shawnee Mission, Kan.
Voth, Mrs. Harold W., 5413 Neosho St., Shawnee Mission, Kan.
Wade, Mrs. Frederick E., 413 W. 62nd St. 13
Wakefield, Mrs. Franklin H., 8352 Overbrook Road, Leawood, Kan.
Walker, Mrs. James C., 609 E. 96th St. 31
Walker, Mrs. John W., 8320 Ensley Lane, Leawood, Kan.
Walker, Mrs. Orville C. Jr. 604 Partridge, Independence
Wall, Mrs. Harry C., 6000 Howe Drive, Shawnee Mission, Kan.
Wall, Mrs. Leonard A., 5011 Neosho Ave., Shawnee Mission, Kan.
Walthall, Mrs. Damon O., 6439 Jefferson St. 13
Ward, Mrs. Robert L., 3128 E. 49th St. North 19
Webster, Mrs. Joseph G., 5532 Locust St. 10
Weiford, Mrs. Edward C., 2009 W. 68th St., Shawnee Mission, Kan.
Welker, Mrs. Joseph E., 6441 Summit St. 13
Wheeler, Mrs. Charles B., 820 W. 57th St. 13
Wheeler, Mrs. John H., 5650 Mission Drive, Shawnee Mission, Kan.
White, Mrs. Charles H., 6518 Overhill Road, Prairie Village, Kan.
White, Mrs. Stoughton F., 6815 Cherokee Lane, Shawnee Mission, Kan.
White, Mrs. William E., 613 W. 57th Ter. 13
Whiteman, Mrs. John R., 9729 Cherokee Lane, Leawood, Kan.
Whitman, Mrs. Doyle C., 6836 Cherokee Lane, Shawnee Mission, Kan.
Whitmore, Mrs. J. Stewart, 1039 W. 58th St. 13
Wilhelm, Mrs. Warren F., 3100 W. 67th St., Shawnee Mission, Kan.
Wilkinson, Mrs. E. A., 2300 W. 69th St., Shawnee Mission, Kan.
Williams, Mrs. Delon Acree, 1252 Stratford Road 13
Williams, Mrs. Joseph C. Jr., 1231 W. 69th St. 13
Williams, Mrs. Roland Dean, 3635 Belleview Place 11
Williams, Mrs. Vincent T., 4400 Blue Ridge Blvd. 33
Willits, Mrs. Lyle G., 1224 W. 62nd St. 13
Willoughby, Mrs. Jean B., 1019 W. 69th Ter. 13
Wilson, Mrs. Brickhouse, 700 Ward Parkway 12
Wilson, Mrs. Clifford C., 5631 Neosho Lane, Shawnee Mission, Kan.
Winer, Mrs. Herbert J., 8136 Rosewood Drive, Prairie Village, Kan.
Winston, Mrs. Bernard H., 1006 W. 67th St. 13
Wise, Mrs. George W., 4610 Homestead Drive, Prairie Village, Kan.
Wolf, Mrs. Jack, 6125 Morningside Drive 13
Woodward, Mrs. Wm. W., 12914 E. 39th Ter., Independence
Workman, Mrs. Charles E., 6609 Milhaven Drive, Shawnee Mission, Kan.
Wortmann, Mrs. Robert F., 2819 W. 66th Ter., Shawnee Mission, Kan.
Wright, Mrs. R. Paul, 4902 Belinder Road, Shawnee Mission, Kan.
Wurster, Mrs. W. Joel, 6007 Birch St., Mission, Kan.
Young, Mrs. James E., 9817 Lee Circle, Leawood, Kan.
Young, Mrs. Paul R., 7424 Gregory Circle 13
Zellermayer, Mrs. Jack, 5801 Lockton Lane, Shawnee Mission, Kan.
Ziegler, Mrs. Allen M., 1401 S. Market St., Holden
Ziegler, Mrs. Dewey K., 8347 Delmar Lane, Prairie Village, Kan.
Zoglin, Mrs. Nathan, 333 W. Meyer Blvd. 13
Zuber, Mrs. Harold V., 6800 Cherokee Lane, Shawnee Mission, Kan.

JASPER COUNTY
(Joplin)

Allen, Mrs. David O., 505 West 34th St.
Barnett, Mrs. Norman H., Rte. 3, Box 181, Tabor Woods
Birsner, Mrs. Frank, 1717 River St., Carthage
Black, Mrs. Mervin H., 1001 West Murphy Blvd.
Burch, Mrs. John E., 1345 Crest Drive
Carnes, Mrs. Victor, 1209 Roland Ave.
Chase, Mrs. Ned B., 2901 Kentucky St.
Chesney, Mrs. George W., 2416 East 12 St.
Cohle, Mrs. Richard, 1609 Lilac Lane, Carthage
Craig, Mrs. Irwin T., 2525 East 12 St.
Crawford, Mrs. A. L., 2931 Pearl Ave.
Crispell, Mrs. Lawrence S., 911 Kensington St.
Curl, Mrs. Howard, 102 Moffet St.
DeTar, Mrs. Burleigh Sr., 410 Jackson St.
DeTar, Mrs. Burleigh Jr., 2736 East 15 St.
Ferguson, Mrs. Lewis H., 3102 Minnesota St.
Ferguson, Mrs. Ralph, 420 East 33 St.
Fritsch, Mrs. Andrew J., 2920 Pearl St.
Graves, Mrs. F. Burton, Rt. 4, Box 491
Hamilton, Mrs. Eugene, 615 N. Pearl St.
Holtzman, Mrs. Samuel, 108 Sergeant
Hornback, Mrs. Edward H., 2609 E. 12 St.
Hurst, Mrs W. W., 2502 E. 13 St.
Isbell, Mrs. C. H., 1046 S. Garrison St., Carthage
Jeans, Mrs. Virgil, 629 Islington Place
Kenney, Mrs. V. E., 728 Chestnut Ave.
Kirschman, Mrs. Robert E., Rt. 4, Box 359
Koehler, Mrs. John W., 3010 Wall St.
McIntyre, Mrs. Emery, 1803 S. Maple St.
McNew, Mrs. W. T., 1204 S. Main St., Carthage
McPike, Mrs. Lloyd H., 3317 Oakridge Drive
Maddox, Mrs. John D., 1330 Crest Drive
Myers, Mrs. Roy E., 623 Sergeant St.
Paddock, Mrs. Charles S., 1500 Range Line
Papp, Mrs. Sandor D., 3343 Pearl St.
Patterson, Mrs. Donald R., Rt. 1, Box 481
Patterson, Mrs. Grover S., 1717 River Road, Carthage
Post, Mrs. Winfred L., 2630 E. 15 St.
Reid, Mrs. Charles T., 411 Jackson St.
Royce, Mrs. J. J., Sarcoxie
Pence, Mrs. F. Wendell, Rt. 2, Box 309, Carthage
Scheberl, Mrs. C. B., 3111 E. 4 St.
Schulte, Mrs. Gregory A., 2515 E. 12 St.
Scorse, Mrs. S. W., 619 W. 2 St.
Smith, Mrs. Roland T., 426 N. Pearl St.
Smith, Mrs. Russell W., 315 Euclid St., Carthage
Stormont, Mrs. R. W., 28 S. Webb St., Webb City
Walker, Mrs. Paul, 1022 N. Sergeant St.
Wetzel, Mrs. Fred S., 1503 S. Garrison St., Carthage
Wieman, Mrs. Harry K., 536 N. Wall St.
Wood, Mrs. George H., 530 E. Highland St., Carthage
Wooldridge, Mrs. Bart F., 1435 Crest Drive
Wright, Mrs. George W., 222 S. Webb St., Webb City
Young, Mrs. C. C., 2518 E. 15 St.

JEFFERSON COUNTY

Allbee, Mrs. Roger, Crystal City
Bolgar, Mrs. Bertalan, Festus
Donnell, Mrs. Harold, DeSoto
Donnell, Mrs. Hart, Crystal City
Donnell, Mrs. Thomas, DeSoto
Fallet, Mrs. Charles, DeSoto
Judge, Mrs. Thomas, Crystal City
Kozal, Mrs. Fran, Crystal City
Mayfield, Mrs. Logan, Crystal City
McKinstry, Mrs. Karl, DeSoto
Rutledge, Mrs. John, Crystal City
Senn, Mrs. Emmett, Herculaneum

JOHNSON COUNTY
(Warrensburg)

Cooper, Mrs. R. Lee, 411 W. Gay St.
Damron, Mrs. Oscar H., 612 N. Maguire St.
Folkner, Mrs. Albert L., 316 Hillcrest Drive
Frein, Mrs. D. E., Leeton
Gonzalez, Mrs. Mario Garza, 508 Jefferson St.
Harness, Mrs. Harry H., Burkarth Road
Johnson, Mrs. Charles S., 821 S. Maguire St.
Lederer, Mrs. Charles M., 617 Clark St.
Maxson, Mrs. T. Reed, Arilen Acres

LAFAYETTE-RAY COUNTIES

Best, Mrs. Robert, Higginsville
Boydston, Mrs. Wayne, Odessa
Brady, Mrs. Hugh, Concordia
Brasher, Mrs. Ben H., Lexington
Coo, Mrs. Edna, Richmond
Coo, Mrs. Thos. B., Richmond
Cope, Mrs. Joseph S., Lexington
Crozier, Mrs. Frank, Richmond
Davault, Mrs. George, Richmond
Fulkerson, Mrs. W. E., Higginsville
Johnston, Mrs. Esther, Concordia
Kelling, Mrs. Douglas, Waverly
Kelling, Mrs. Jordan, Waverly
Koppenbring, Mrs. W. E. Jr., Higginsville
Koppenbrink, Mrs. W. E. Sr., Higginsville
LaHue, Mrs. William, Lexington
Liston, Mrs. Odis, Oak Grove
Martin, Mrs. W. E., Odessa
McFadden, Mrs. Gene, Waverly
Riley, Mrs. Charles, Richmond
Ward, Mrs. Joe W., Lexington
Williams, Mrs. John, Oak Grove

MARION COUNTY
(Hannibal)

Bach, Mrs. Lysle, 1737 Harrison Hill
Burns, Mrs. Francis, 2903 Hill St.
Canella, Mrs. John, 3254 St. Mary's Ave.
Clisham, Mrs. John, 300 Virginia Ave.
Fischer, Mrs. Thomas, 8 Orlando Drive
Foreman, Mrs. Phillip, 3342 W. Ely Road
Glascock, Mrs. Donald, Palmyra
Greene, Mrs. Harry, 1911 Harrison Hill
Hamlin, Mrs. Wyeth, 3405 St. Mary's Ave.
Landau, Mrs. Dan, 2901 Pleasant St.
Lanning, Mrs. Robert, 7 Cardiff Drive
Latimer, Mrs. Walter, 2303 Palmyra Road
Lucke, Mrs. James K., 4000 McMasters Ave.
Mann, Mrs. James K., 4914 College St.
Purcell, Mrs. Paul, Hull, Ill.
Rapp, Mrs. Earl, 19 Holiday Ave.
Roller, Mrs. Merrill, 1000 Country Club Drive
Smith, Mrs. W. J., 3101 St. Mary's Ave.
Steele, Mrs. James, 1106 Hill St.
Strong, Mrs. Richard, 10 Riverpoint Ave.
Sweets, Mrs. Henry Jr., 207 N. Sixth St.
Walterscheid, Mrs. John, 12 Riverpoint Ave.
Well, Mrs. Julius, Palmyra

MEMBERS-AT-LARGE

Bauman, Mrs. Henry C., 921 W. Third St., Maryville
Bozzo, Mrs. Raymond J., 408 W. Second St., Washington
Brenner, Mrs. Paul A., 108 W. Washington Ave., Owensville
Cohrs, Mrs. Clarence C., 2 Flower Lane Ter., Moberly
Comeau, Mrs. Richard, Dexter Convalescent Manor, Dexter
Crider, Mrs. Clara, Dixon
Crider, Mrs. Russell J., 1875 S. River Road, St. Charles
Davis, Mrs. Landis Y., Canton
Dreyer, Mrs. Philip V., Huntsville
Dunshee, Mrs. Robert E., 145 Sunset Drive, Maryville
Eggleston, Mrs. Donald E., 410 N. Rutherford St., Macon
Fleming, Mrs. Jacob W. Jr., 1 Windsor Place, Moberly
Fleming, Mrs. Thomas S., 517 Fort St., Moberly
Garrison, Mrs. T. W., Box 548, Camdenton
Hoelscher, Mrs. H. F., Hickory Haven, Warrenton
Huber, Mrs. L. E., 400 W. Reed St., Moberly
Kimball, Mrs. I. W., 6600 Tower Drive, Parkville
Long, Mrs. David, M-40 Lake Lotawana, Lee's Summit
McNeel, Mrs. Lee A., Greenfield
Muench, Mrs. Ludwig O., 1530 Riverview Dr., Washington
Netherton, Mrs. George F., 312 E. Third St., Cameron
Neubeiser, Mrs. Benedict, Headacres Farm, Rt. 1, Portage des Sioux
Parker, Mrs. Graham, Platte City
Powers, Mrs. John A., 315 N. Pine St., Harrison, Ark.
Richardson, Mrs. W. R., Box 228, Union
Riffel, Mrs. Gordon W., Bourbon
Schmidt, Mrs. Charles, Gerald
Schmidt, Mrs. Herbert H., Box 18, Marthasville
Shaw, Mrs. Carvel T., 1008 Washington St., Hermann
Strehlman, Mrs. B. G., 510 West End Ave., Union
Stricker, Mrs. E. A., 501 Evergreen St., St. James
Summers, Mrs. Jacob H., Knight Bldg., Lebanon
Underwood, Mrs. M. K., 1811 Vichy Road, Rolla
Waltrip, Mrs. Roy T., 931 Hawthorne Drive, Sikeston

MILLER-MONITEAU-MORGAN

Buehler, Mrs. Carl T. Jr., Eldon
Burke, Mrs. J. P., California
Fulks, Mrs. Richard B., California
Gallagher, Mrs. Lionel M., California
Gunn, Mrs. Jack, Versailles
Latham, Mrs. Kenyon, 200 South High St., California
Lyle, Mrs. Ray, Versailles
Shelton, Mrs. E. O., Eldon
Washburn, Mrs. J. L., Versailles

MINERAL AREA
(St. Francois-Iron-Madison-Washington-Reynolds-Ste. Genevieve Counties)

Appleberry, Mrs. Charles H., 706 West Main St., Flat River
Appleberry, Mrs. Reuben, 815 W. Columbia St., Farmington
Brennan, Mrs. John A., 2 Hoctor Drive, Farmington
Bull, Mrs. Ben, 109 S. Knob St., Ironton
Burcham, Mrs. Tom R., Highway W, Farmington
Carleton, Mrs. Charles E., 501 Center St., Farmington
Chastain, Mrs. C. W., R. R. 3, Farmington
Crouch, Mrs. F. Richard, 714 Ste. Genevieve St., Farmington
Dennis, Mrs. Paul, 709 Tyler St., Flat River
Evans, Mrs. Albert, 113 Banham St., Bonne Terre
Ford, Mrs. William, 34 Tanglewood Court, Farmington
Foster, Mrs. Jack L., Desloge
Grossman, Mrs. Marvin, 500 Marshall St., Fredericktown
Haw, Mrs. Marvin T., 207 Fite St., Bonne Terre
Huckstep, Mrs. Robert A., 1313 N. Washington St., Farmington
Hunt, Mrs. John W., Jr., 110 Bell St., Leadwood
Karraker, Mrs. Alvan G., 507 North St., Farmington
Mullen, Mrs. Jack, R. R. 2, Bonne Terre
Oliver, Mrs. George A., 117 Oak Hill Downs, Farmington
Taylor, Mrs. Van W., 54 Church St., Bonne Terre
Watkins, Mrs. George L., 813 Dewey St., Farmington
Watkins, Mrs. George Linn, 812 Dewey St., Farmington

PERRY COUNTY
(Perryville)

Blaylock, Mrs. G. A., 308 W. Ste. Maries St.
Carron, Mrs. Oscar A., 308 N. Waters St.
DeGenova, Mrs. Gerald H., 1280 Ridgeway Drive, Ste. Genevieve
Fairchild, Mrs. James F., Rt. 2
Feltz, Mrs. Lawrence W., 20 S. Feltz St.
Fischer, Mrs. Theodore, Altenburg
Lutkewitte, Mrs. Jos. F., 33 St. Jude Drive, Ste. Genevieve

McDermott, Mrs. Alfred E., 619 Bruce St.
Utterman, Mrs. Wm. F., 614 So. Main St.

PETTIS COUNTY
(Sedalia)

Beckmeyer, Mrs. W. A., 719 W. 4th St.
Bishop, Mrs. William T., 616 W. 6th St.
Boger, Mrs. John W., 2803 Skyline Drive
Brady, Mrs. Charles H., 720 W. 5th St.
Braverman, Mrs. Elliot M., 2510 Wing Ave.
Brazos, Mrs. John, Route 2
Campbell, Mrs. Albert J., 1500 W. 16th St.
Campbell, Mrs. Albert J. Sr., 319 E. Broadway
Dyer, Mrs. D. P., 2511 Stephenson St.
Edwards, Mrs. David R., 1619 S. Moniteau St.
Fisher, Mrs. Stanley D., 2200 S. Kentucky St.
Gonser, Mrs. Karl B., 1619 W. Broadway
Hite, Mrs. H. A., Greenridge
Hopkins, Mrs. Thomas J., 1506 W. Broadway
Lamy, Mrs. John E., 509 W. Broadway
Long, Mrs. Frank B., 723 W. 7th St.
Mitchell, Mrs. John E., Broadway Arms Apt.
Proctor, Mrs. Donald C., 908 W. Broadway
Roberts, Mrs. Paul A., 101 E. Marshall St., Sweet Springs
Shy, Mrs. Milton P., 1023 W. 7th St.
Siegel, Mrs. Carl D., 810 S. Barrett St.
Snavely, Mrs. E. C., 908 S. Grand St.
Stauffacher, Mrs. Gordon C., 1313 W. Broadway
Stewart, Mrs. Robert H., 201 Driftwood Drive
Trader, Frances W. (Miss), 219 W. 7th St.
Walters, Mrs. A. L., 1000 W. 7th St.
Worley, Mrs. C. A., 102 W. Ray St., Sweet Springs

ST. LOUIS CITY
(St. Louis)

Ahlering, Mrs. George H., 7129 Lindell Blvd. 30
Allen, Mrs. Hollis N., 681 N. Forest St. 19
Allen, Mrs. Melvin A., 14 Lindworth Drive 24
Arneson, Mrs. Axel N., 6314 Waterman Ave. 30
Austin, Mrs. Martin G., 119 Summit St. 19
Backer, Mrs. Matt H. Jr., 101 Flamingo Drive 23
Balazs, Mrs. Karl J., 611 Canonbury Drive 19
Bandle, Mrs. Donald F., 3801 January St. 9
Barden, Mrs. Frank W., 41 Beaver Drive 41
Bartlett, Mrs. Robert W., 6459 Wydown Blvd. 5
Bartlett, Mrs. Willard Jr., 6345 Ellenwood Drive 5
Bartlett, Mrs. Willard Sr., 53 Westmoreland Place 8
Bartnick, Mrs. Mitchell L., 3895 Holly Hills Blvd. 16
Bassett, Mrs. Robert B., 2 Beverly Place 12
Becke, Mrs. William G., 18 Lorenzo Lane 24
Bell, Mrs. Robert M., 35 Glen Road 19
Benjamin, Mrs. Durand, 7340 Navarre Circle 23
Berland, Mrs. Harry I., 29 Granada Way 24
Bilsky, Mrs. Nathan, 7840 Lafon Place 30
Bindbeutel, Mrs. Arthur H., 3953 Holly Hills Blvd. 16
Bindbeutel, Mrs. Donald A., 630 Westborough Place 19
Bircher, Mrs. John L., 3932 Federer Place 16
Boemer, Mrs. Lilburn C., 49 Clermont Lane 24
Bohrer, Mrs. Harry C., 4112 Flora Place 10
Bosse, Mrs. Edwin H. Sr., 6906 Washington Ave. 30
Bowdern, Mrs. Edward H., 2 Berkshire Blvd. 17
Boyd, Mrs. Arthur M., 6556 Delor Ave. 9
Bradley, Mrs. Frank R., 7404 Oxford Drive 5
Bradley, Mrs. John Martin, 275 North Union Ave. 8
Brennan, Mrs. George A., 10641 Rebecca Drive 28
Brennan, Mrs. Robert Alexis, 6030 Highfield Road 9
Bricker, Mrs. Eugene M., 43 Briarcliff Road 24
Brodeur, Mrs. Armand E., 141 Horseshoe Drive 22
Broun, Mrs. Goronwy Owen, 5290 Waterman Ave. 8
Broun, Mrs. Goronwy Owen Jr., 6359 Waterman Ave. 30
Brown, Mrs. Clyde O., 7419 York Drive 5
Brown, Mrs. E. Eugene, 379 N. Taylor Ave. 8
Brown, Mrs. James Barrett, 4 N. Kingshighway Blvd. 8
Brown, Mrs. Seymour, 2 Ricardo Lane 24
Bruns, Mrs. Kenneth, 6318 Washington Blvd. 30
Budd, Mrs. John J. Jr., 6144 McPherson Ave. 12
Burns, Mrs. Francis J., 6500 Ellenwood Drive 5
Burroughs, Mrs. W. H., 7327 Pershing Blvd. 30
Burst, Mrs. Donald O., 61 Trent Drive 24
Byrne, Mrs. John Edward, 5878 Delor St. 9
Calkins, Mrs. Delevan, 1515 Schulte Road 41
Cameron, Mrs. Solon, 43 Washington Ter. 12
Cannon, Mrs. Edward M., 20 Briarcliff 24
Cannon, Mrs. William J., 43 Clermont Lane 24
Cappel, Mrs. Powell B., 27 Old Westbury Lane 19
Carney, Mrs. Joseph E., 6625 Pernod Ave. 9
Carroll, Mrs. George A., 7831 Delmar Blvd. 30
Carter, Mrs. John F., 15 Friese Drive 32
Chamness, Mrs. James T., 3 Town & Country Drive 24
Cherre, Mrs. Charles J., 10 Haddington Court 5
Ciapciak, Mrs. Stanley J., 30 Log Cabin Drive 24
Clark, Mrs. Clarence L., 705 Questover St. 41
Collodi, Mrs. George A., 20 Southcote St., 17
Conrad, Mrs. Adolph H. Jr., 9 Dromara Road 24
Conrad, Mrs. Marshall B., 8542 Colonial Lane 24
Cook, Mrs. Ralph L., 44 Nolan Drive 22
Correnti, Mrs. Nicholas A., 6617 Itaska St. 9
Costa, Mrs. Dominic V., 10 Devondale Lane 31
Crossman, Mrs. Robert W., 1509 Holly Drive 19
Daake, Mrs. John W., 48 Portland Place 8
Danis, Mrs. Peter G., 7017 Kingsbury Blvd. 30
Dewald, Mrs. Paul A., 527 Warren Ave. 30
DiLeo, Mrs. Senatro W., 667 Langton Drive 5
Donahoe, Mrs. James L., 7336 Princeton St. 30
Doubek, Mrs. John Charles, High Ridge, Rt. 2
Doyle, Mrs. Charles R., 28 Kingsbury Place 12
Drake, Mrs. Truman G., 6344 Alexander St. 5
Drews, Mrs. Robert C., 7361 Cornell Ave. 30
Dreyer, Mrs. Carl Joseph, 45 Glen Road 19
Dripps, Mrs. Roy C., 5210 Jamieson St. 9
Dubuque, Mrs. Theodore J. Jr., 95 Aberdeen Place 5
Eades. Mrs. Dee W., 6 Kingsbury Place 12
Edwards, Mrs. Joseph C., 610 West Polo Drive 5
Eigel, Mrs. Edwin G., 3654 Flora Place 10
Ernst, Mrs. Edwin C., 2 Schultz Road 22
Farley, Mrs. William, 2 Spoede Acres 41
Farrell, Mrs. Robert J., 6906 Roberts Ave. 30
Finn, Mrs. Murray Eugene, 4904 Pershing Place 8
Fish, Mrs. Virgil O., 2500 Town & Country Lane 31
FitzGerald, Mrs. Leo P., 7219 Cornell Ave. 30
Flotte, Mrs. Bernard H., 6 Lila Lane, Florissant
Flotte, Mrs. Sylvester A., 9113 Glen Garden 36
Ford, Mrs. Lee T. Jr., 45 Green Acres 37
Franklin, Mrs. Max S., 7536 Buckingham Drive 5
Fries, Mrs. Armand D., 11 West Geyer Lane 31
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Gantner, Mrs. George E. Jr., 6641 Pershing Ave. 30
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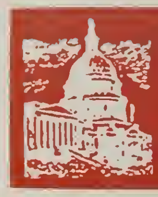

WASHINGTON

MEDICARE SIDETRACKED

On Wednesday, June 24, the House Ways and Means Committee met to complete its executive session consideration of the King-Anderson bill, alternative proposals for financing the health care of the aging and various other Social Security amendments. When Committee Chairman Wilbur Mills (D) Ark. called upon Representative Cecil King (D) Calif., the House sponsor of the King-Anderson bill, he declined to call up his proposal for a Committee vote. Mr. King indicated that he knew he did not have enough votes in the Committee in support of his bill and wanted to avoid an adverse Committee vote. Representative King did however, reserve the right to call up the bill at some later date for Committee vote.

The Committee did vote to recommend that there be a 5 per cent across-the-board increase in Social Security cash benefits. If enacted, this increase would raise the maximum family benefit to $254 per month and the maximum single benefit to $127. The Committee also voted that there be compulsory inclusion of physicians, as well as firemen and policemen, under the retirement program of Social Security. Other amendments approved by the Committee would provide for the inclusion of tips of cab drivers, waiters and others in the Social Security taxable wage base; children's benefits to continue for dependent children who are full-time students up to their 22nd birthday (presently benefits stop at 18); and would make widows eligible to receive reduced benefits at age 60 (presently age 62).

These increased benefits would be financed in the following way. Beginning in January 1965, the wage base on which Social Security taxes would be paid by the employer-employee would be increased from the present $4,800 to $5,400 and the tax on that wage base would be modified as follows: in 1965, it would remain at the present 3⅝ per cent; 1966, raised to 4 per cent; 1967-1969, it would be increased to 4.5 per cent; and in 1970 and thereafter, increased to 4.8 per cent. The tax rates would also change for self-employed people who make the entire Social Security tax contribution themselves. A self employed person currently pays 5.4 per cent on his first $4,800 of earnings. The new bill would raise the tax base to $5,400 and the self-employed tax rate to 5.7 per cent on Jan. 1, 1965, to 6 per cent in 1966, to 6.8 per cent in 1968 and to 7.2 per cent in 1971.

The bill is expected to cost $1 billion with half the cost met by the increase in the wage base and the other half from the increased tax rate. The bill was expected to be considered on the floor of the House, under a closed rule (amendments are not permitted from the floor), on July 20 after the Republican National Convention. It is interesting to note that the Committee did not recommend any amendments to the present Kerr-Mills law.

PHYSICIANS IN THE UNITED STATES

According to the Health Information Foundation, there are presently 278,275 physicians in the United States. This total includes 10,660 retired physicians, 2,752 not in medical practice, 21,914 in United States Government Service, and 3,133 who are in foreign countries or whose addresses are unknown.

By activity, 63 per cent are in private practice, 17 per cent in hospital service, 4 per cent in teaching or administration or research, 2 per cent in laboratory or preventive medicine, 8 per cent in federal government service, and the remaining 6 per cent are not in practice or not in the country.

The ratio of all physicians to the total population remained rather constant at about 136 per 100,000, including armed forces abroad, from 1940 to 1960. Since 1960 the ratio has risen and is presently 145.8 per 100,000. The ratio of active physicians outside Federal Government to civilian residents is 127.5 per 100,000.

CHIROPRACTIC CARE OPPOSED

On June 25, the Special Sub-committee on Federal Employees' Compensation of the Senate Labor and Public Welfare Committee held one day of public hearings on S. 1710 and S. 2078 which would authorize chiropractic care of injured federal employees under the provisions of the Federal Employees Compensation Act. In a letter to Subcommittee Chairman Lee Metcalf (D) Mont., AMA Executive Vice President. Doctor F. J. L. Blasingame, stated the Association's strong opposition to chiropractic. "Chiropractors are not educated or equipped, either by background or training, to diagnose human illness. This inability, coupled with their pseudo-

(Continued on page 668)

rthritic joints from

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ty arthritis, rheumatoid spondylitis, osteoartis, bursitis, fibrositis, and neuritis. Arthralgen y be used for analgesia in colds, flu, and ious myalgias.

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SUPPLY: Arthralgen (white, scored) and Arthralgen-PR (yellow, scored) tablets are available in bottles of 100 and 500.

*Cohen, et al: J.A.M.A., 165:225, 1957.

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Across
Missouri

St. Louis Blue Shield—Annual Meeting

An average of more than a million dollars a month was paid in medical-surgical benefits by the St. Louis Blue Shield Plan during the fiscal year ended April 30, it was announced at the 19th annual meeting of the Blue Shield voting board held in St. Louis on June 28.

Dr. R. O. Muether, president of St. Louis Blue Shield, reported that a total of $12,181,309 was distributed in benefits during the year. This is the first year in the Plan's history that payments for services to members reached the million dollar per month average, Dr. Muether said.

The payments were made for 506,960 different health care services, an increase of 48,465 more than the preceding year.

Membership in the Plan, which serves residents of St. Louis and 84 Missouri counties, reached a new peak of 725,685 persons, as of April 30, Dr. Muether said. This is an increase of 48,325 during the year.

Of the total membership, 533,495 persons are enrolled in employee-group programs, while 192,190 are participants in non-group, individual protection programs. Among the members are more than 65,000 persons aged 65 and over, including 11,500 in the Plan's special Senior Citizens Program which provides paid-in-full benefits for members with limited incomes.

Dr. Muether, a St. Louis physician, was reelected president of St. Louis Blue Shield at the meeting. Other officers reelected were Ben M. Bull, M.D., Ironton, first vice president; Leo J. Hartnett, M.D., St. Louis, second vice president; Stephen J. Wolff, Pevely Dairy Co., executive, secretary, and Phillip C. McGrath, retired St. Louis business executive, treasurer.

Richard A. Sutter, M.D., St. Louis County, Avery P. Rowlette, M.D., Moberly, and W. L. Baumann, assistant comptroller, National Lead Co., St. Louis, were elected to the Board of Trustees.

Physicians elected to the Plan's voting board were David N. Kerr, M.D., St. Louis; John F. Shaner, M.D., St. Louis; Paul W. Miles, M.D., St. Louis County, and Wyeth Hamlin, M.D., Hannibal.

Named as public representatives on the voting board were three St. Louisans, George P. Meier, partner, John J. Meier Grocery Co.; James A. Yates Jr., partner, Yates, Heitner and Woods, investments, and Frank Smith, partner, Smith-Scharff Paper Co. Ray Eckles, president of the Triangle Supply Co., Moberly, was also elected a member of the voting board.

Missouri Ophthalmological Society, Inc.

The Missouri Ophthalmological Society, Inc., was incorporated on October 24, 1963, under the General Not for Profit Corporation Act of Missouri.

The first meeting of the general membership was held in St. Louis, March 9, 1964, in conjunction with the Annual Session of the Missouri State Medical Association. The following Board of Directors was elected at the meeting: Drs. Winfred L. Post, Joplin; Paul G. Wolff, Cape Girardeau; John A. Buesseler, Columbia; Robert Dean Mattis, St. Louis; James W. Nofles, St. Louis; Clyde R. Milster, St. Louis; Samuel Kantor, Kansas City; James T. Robison, Kansas City; and Dick H. Underwood, Kansas City.

The following officers were elected for the year 1964-1965: Drs. Winfred L. Post, President; Robert Dean Mattis, President-elect; and John A. Buesseler, Secretary-Treasurer.

Cole County Court Decision

Circuit Judge Sam C. Blair, on July 6, ruled in favor of the State Board of Registration for the Healing Arts in the suit filed October 22, 1963, by Kenneth C. Mitchem, D.O., and Aulley Woodrow Wilson, D.O. The suit was filed by Drs. Mitchem and Wilson requesting the Court to review the action taken by the Board in refusing to recognize the M.D. degrees conferred upon each of them by the California College of Medicine.

Attorneys for the plaintiffs admitted that their clients did not actually attend the California Col-

(Continued on page 670)

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Side effects: Slight drowsiness and, rarely, allergic or idiosyncratic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. **Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use of meprobamate or meprobamate-containing drugs. **Precautions:** Should administration of meprobamate cause drowsiness, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Although suicides with 'Deprol' have not been reported, prescribe cautiously and in small quantities to patients with suicidal tendencies. Massive overdosage of meprobamate may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Even though it has not been reported with 'Deprol', consider the possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, and to physicians on request.*

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Missouri Academy of General Practice

The Annual Banquet and dinner meeting of the Greater Kansas City Missouri Chapter of the Academy of General Practice was held on Thursday evening, April 30, in the Officer's Club Ball Room, Richards-Gebaur AFB. This gala affair began at 6:30 p.m. with a social hour followed by dinner and then the official program. One hundred and fifteen members and guests of the Kansas City Chapter were present to enjoy the occasion.

Drs. Carrier, McCraw, Haight, Elliott, Hardwicke and Miller pose for picture.

The featured speaker of the evening was H. M. Hardwicke, M.D., Jefferson City, Acting Director, Division of Health of the State of Missouri, who discussed the idea that "a new doctor image is emerging." He pointed out that the many advancements in medicine have been a big factor in developing the public's image of the doctor of today. He advised that all physicians be more concerned about this image of the medical profession as mirrored on the mind of today's public.

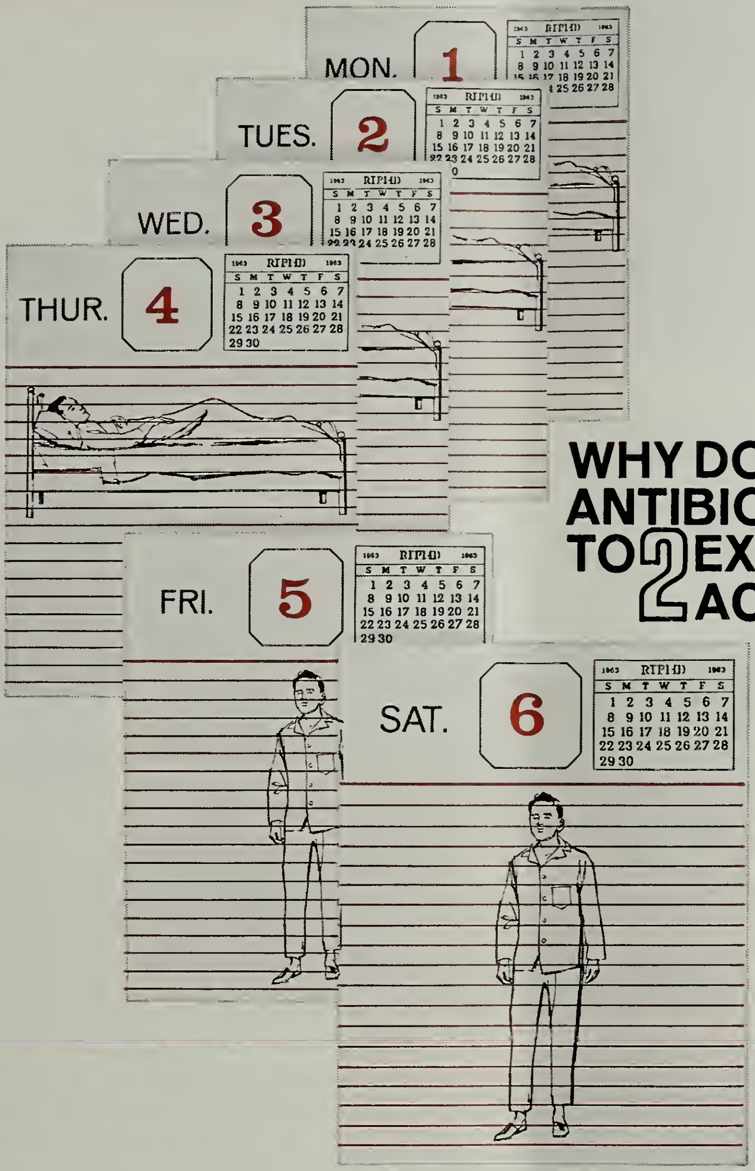
Dr. Eubank receives plaque from Dr. Williams.

R. Glenn Elliott, M.D., President of the Kansas City Academy, presided over the evening's official program. He introduced the many guests present, including the President-elect of the MAGP, Dr. Doyle McCraw of Bolivar and the President of the Jackson County Medical Society, Dr. Gerald Miller. Dr. Dillard M. Eubank of Raytown was honored by the receipt of the Academy's Plaque as the chapter's "Man of the Year in Community Leadership." The plaque was presented to Dr. Eubank by Dr. George P. Williams, Treasurer of the local Academy chapter.

Following Dr. Hardwicke's major address, Mr. William Delay of the AAGP described the operation of "Project More" which has to do with efforts of Academy Chapters and others to stimulate students to study medicine. New officers of the Chapter installed on this occasion were: John M. Haight, M.D., President; W. J. Stelmach, M.D., President-elect; R. D. Dwyer, M.D., Secretary; George P. Williams, M.D., Treasurer.

Dr. Nester, President, St. Louis Academy, and Drs. Broun, Blount, Klinefelter and Sellers participate in panel discussion.

The 1964 Spring Scientific Symposium entitled, "New Advances in Therapy" of the St. Louis Academy of General Practice, held on Sunday, May 3, at the Chase Hotel in St. Louis, was a signal success. A large attendance was present throughout the entire day to hear a morning session on medical subjects and an



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A large audience attended.

afternoon session on medical problems. The moderator of the session on medicine was G. O. Broun, M.D., Dean of the St. Louis University School of Medicine. Speakers on this session included A. M. Sellers, M.D., University of Pennsylvania School of Medicine; S. G. Blount Jr., M.D., University of Colorado Medical Center; and H. F. Klinefelter Jr., M.D., Johns Hopkins School of Medicine. A panel discussion and questions from the audience by the speakers followed the formal presentations. After an excellent luncheon through the courtesy of Geigy Pharmaceuticals, the afternoon session on surgery was opened by moderator, Vernon E. Wilson, M.D., Dean, University of Missouri Medical School. The speakers on this part of the program included Ralph A. Reis, M.D., Northwestern University Medical School, Ormand C. Julian, M.D., University of Illinois College of Medicine, and Marion S. DeWeese, M.D., University of Michigan Medical Center, but after July 1, Chairman of the Department of Surgery at the University of Missouri School of Medicine.

Questions from the audience were also discussed by these speakers following the formal talks. The day's festivities concluded with a cocktail reception at 5:00 p.m., for the doctors registered and their wives, held on the Starlight Roof at Hotel Chase.

A special program for the doctors' wives was held throughout the day and there is every reason to believe this helped to promote the good attendance of physicians for the day's activities.

WASHINGTON

(Continued from page 658)

scientific method of treatment and their vociferous stand against life-saving vaccines and the well-recognized advances of the medical profession in the control, diagnosis, treatment and prevention of disease requires, or perhaps demands, that no consideration be given to them." In concluding his remarks, Doctor Blasingame stated that "We believe that the enactment of S. 1710 or S. 2078 would be neither in the public interest, nor in the interest of those Federal employees who might mistakenly seek the services of a cult practitioner, rather than the sound, scientific advice of qualified physicians."

MILITARY RETIREES MEDICAL CARE EXAMINED

The Special Sub-committee on Construction of Military Hospital Facilities of the House Armed Services Committee has been holding hearings on the subject of medical care for retired military personnel and their dependents. Dr. Reuben A. Benson, Bremerton, Wash., Chairman of the AMA Council on National Security, appeared on July 2, to present the Association's testimony. He stated the AMA's opinion that to the maximum extent possible, medical care to retirees should be provided by civilian physicians in civilian facilities. Doctor Benson went on to comment that "The Association, however, recognizes that the retiree and his dependents may be authorized the use of military facilities but recommends that such use be limited to present military facilities on a space-available basis." The Association suggested that any plan agreed upon by the Committee should be patterned after the Federal Employees Health Benefits Program and should: "(a) permit a realistic choice of plan on the part of the individual retiree; (b) permit all qualified carriers to offer coverage; (c) require financial participation of the retiree or his survivor in the payment of premiums under any plan or plans selected, and provide a policy to each participant, and (d) provide for a minimum of governmental regulatory authority over participating carriers or plans." It has been estimated that by 1980, 4,397,000 retired military personnel and their dependents would be eligible for participation in the program.

Woman's Auxiliary

Mrs. Stoltz and Mrs. Evans were honored at a beautiful tea and style show on Sunday afternoon at the opening of the 41st AMA Auxiliary Meeting. The stunning gowns, suits and coats of handsome materials and colors were all designed and made in Mrs. Wong's shop. It was truly a lovely show.

Mrs. Delevan Calkins

On Sunday evening the California Masonic Memorial Temple on Nob Hill was filled to hear Dr. William C. Menniger, psychiatrist and president of the Menniger Foundation, Topeka, Kan., and Rabbi Abraham J. Heschel of New York City, professor of Jewish ethics and author of "Man Is Not Alone" and "God in Search of Man" speak on the Patient as a Person. A program on the same subject followed on Monday titled "When Spiritual Guidance Helps" which emphasized the need of the physician and clergy to work together. The importance of treating the whole patient has been received with great interest and already 43 medical societies have committees working with the Department of Medicine and Religion.

Monday morning Missouri representatives had breakfast together in the Oasis Room and from then on the delegates, Mildred Bohnsack and I turned our backs on colorful San Francisco and devoted four mornings and two afternoons to Auxiliary business.

An excellent play "To Temper the Wind" was done during the Homemaker Service Session and eloquently portrayed the need for "Substitute Mothers." This greatly needed service requires the cooperation of a whole community to be successful and is a chance for an auxiliary to work with many other organizations in starting a Homemaker Service.

There have been increasing requests for the National President to visit and meet with other groups. This would offer an opportunity for the auxiliary to project and advance its aims. With the increase of revenue from the raise in national dues from $1.00 to $2.00 it may be possible for the president to accept some of the invitations from other Clubs. For the first time representatives from 34 National Women's groups were guests of honor at Monday's luncheon.

In the two minute reports of the state presidents it was interesting to note the various programs stressed during the year. Health Careers was high on the list, mental health with emphasis on "Milestones to Maturity," Statewide Safety Programs, International Health Activities, Legislation and Civil Defense. In seven states doctors pay their wives' auxiliary dues and Massachusetts has made plans to initiate such a program this year. AMA-ERF was stressed by every group and a check for $307,318.14 was presented to Dr. Raymond McKeown, AMA-ERF President by Mrs. C. Rodney Stoltz. California was the largest contributor this year in the amount of $47,486.00. Since the program's beginning the Auxiliary has contributed $1,827,087.20.

The Honolulu County Auxiliary won the Disaster Preparedness award and four other counties received recognition: Cincinnati, Ohio; Cook County, Ill.; Baton Rouge, La., and Gulf Coast, Miss.

In the field of Safety an Award of Merit was given to the Alachua, Fla. Auxiliary for its two

Three Auxiliary leaders attend AMA session in San Francisco, Mrs. Delevan Calkins, President, Missouri Auxiliary; Mrs. Richard A. Sutter, President-elect, Woman's Auxiliary to AMA; Mrs. Ralph Bohnsack, President-elect, Missouri Auxiliary.

year, over-all safety program and to the Trenton, New Jersey Auxiliary an Award of Honor was given for an educational program on accident and falls prevention among the aged.

Wednesday, June 24, was a red letter day for two reasons: The announcement that the Medicare Program had been shelved indefinitely in the House Ways and Means Committee brought spontaneous, enthusiastic applause from all the women who had been communicating with their congressmen on this matter.

The election of officers for 1964-1965 took place and Mrs. Richard A. Sutter (Missouri's Betty) was elected and installed as President-elect of the Woman's Auxilary to the AMA. Congratulations Betty! Missouri is happy.

The scope of the work done through the 50 state auxiliaries is truly heartwarming and our accomplishments make us feel we are the right arm of the AMA. As we continue our past programs let us broaden our scope to include the safety course for licensed drivers, safety on the farm, the AMA health information poster and pamphlet racks and extending hospitality to foreign doctors and their wives. Remember the theme of our New National President, Mrs. William H. Evans, "Better Health . . . Better World."

Mildred Bohnsack, President-elect and I found the convention fun and hard work and we missed our past-president, Jane Crispell.

ACROSS MISSOURI

(Continued from page 662)

lege of Medicine. Dr. Wilson received his D.O. degree from the Kansas City College of Osteopathy, and Dr. Mitchem attended both the Kansas City School and the Chicago College of Osteopathy.

The State Board pointed out that neither of them attended a medical school and that the state law clearly states that no person can be licensed as a Medical Doctor unless he attended a medical college through at least four terms of 32 weeks each.

It was not known at the time of publication as to whether or not the plaintiffs would appeal Judge Blair's ruling to a higher court.

Charges by Chiropractor

The Missouri Chiropractic Association refused to expel a member who charged that many chiropractors were illegally invading the field of medical doctors, according to a recent Associated Press release.

Vernon H. Grogan, D.C., Fulton, a member of the five man State Board of Chiropractic Examiners, made the charge in a speech at the joint convention of the Association and the Missouri Chiropractic Society. "Many chiropractors are attempting to enter the medical field of practice by the illegal and unethical use of vitamins, food supplements and therapeutical devices," he said, instead of sticking to their traditional field of spinal adjustment.

The Association, after heated discussion, in a closed session, June 7, voted 57 to 25 against expelling him.

DEATHS

Esker, George, M.D., Nevada, a graduate of St. Louis University, 1935; member of St. Louis Medical Society; aged 54; died April 24, 1964.

Booth, Herbert R., M.D., Hamilton, a graduate of Rush Medical College, 1951; member of Grand River County Medical Society; aged 77; died April 29, 1964.

Penn, Robert, M.D., Silex, a graduate of St. Louis College of Physicians and Surgeons, 1908; member of Lincoln-St. Charles County Medical Society; aged 80; died May 9, 1964.

Lissack, Edmund H. M., M.D., Concordia, a graduate of Nebraska University, 1920; member of Lafayette-Ray County Medical Society; aged 70; died May 29, 1964.

Ruddell, George W., M.D., Ferguson, a graduate of Barnes University, 1904; member of St. Louis Medical Society; aged 92; died May 30, 1964.

Hardesty, Joel W., M.D., Hannibal, a graduate of St. Louis University, 1912; member of Marion-Ralls-Shelby County Medical Society; aged 79; died June 1, 1964.

Lacey, N. Eugene, M.D., Kansas City, a graduate of the University of Michigan, 1926; member of Jackson County Medical Society; aged 64; died June 4, 1964.

Hale, Tyre H., M.D., St. Louis, a graduate of Kansas Medical College, 1906; member of St. Louis County Medical Society; aged 85; died June 9, 1964.

Young, John S., M.D., St. Louis, a graduate of National University, 1914; member of St. Louis County Medical Society; aged 76; died June 12, 1964.

Harmann, Martin F., M.D., St. Louis, a graduate of Physicians and Surgeons Medical College, 1902; member of St. Louis Medical Society; aged 82; died June 19, 1964.

Foster, Robert L., M.D., St. Louis, a graduate of Loyola University, 1915; member of St. Louis County Medical Society; aged 82; died June 23, 1964.

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Missouri Medicine

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SEYMOUR HABER, M.D., *Kansas City, and*
ELLIOTT MICHELSON, M.D., *Baltimore, Md.*

The Enlarged Mediastinal Shadow in Infants

A case report of suspected cardiomegaly which was resolved by steroid therapy is presented.

Dr. Haber is Assistant Professor of Radiology, Kansas City General Hospital and Medical Center, and Dr. Michelson is with the Department of Surgery, Sinai Hospital, Baltimore, Md.

DURING INFANCY, the radiologic evaluation of the mediastinum is notoriously difficult. The thymus, lymph nodes, heart and great vessels usually appear as a single conglomerate shadow, and attempts at separating these structures is tantamount to "trying to identify structures contained within a bag."[1]

There is marked variation in the size of the normal thymus and occasionally it may completely cover the heart. The enlarged thymus, overlapping the heart shadow, may simulate cardiomegaly and, in the presence of equivocal clinical findings, may lead to unnecessary cardiac catheterization and/or angiocardiography.

The following is a case report of suspected cardiomegaly which was resolved by steroid therapy.

J. Q., a twin, private patient of Dr. L. Donner was born prematurely, weighing 1620 grams. The other sibling died one hour postpartum and was found to have a congenital heart lesion. At 16 hours of age, the patient developed tonic and clonic seizures and was found to have a blood sugar of 10 mg. per cent. Poor therapeutic response followed IV glucose and glucagon. On the fourth day, steroid therapy was started, and following Solu-Cortef the blood sugar rose to 100 mg. per cent. ACTH was then maintained for seven days, with gradual withdrawal; the blood sugar thereafter remained normal. On numerous examinations, a grade II systolic murmur was heard at the left sternal border. At the age of 48 days, tachycardia (180 per minute) and tachypnea (60 to 80 per minute) developed. Digitalization resulted in improvement, and he was discharged on digitalis therapy at the end of three months.

The child was followed in the Pediatric Clinic, was in excellent health, and had gained weight; but the heart murmur persisted. A chest film taken at about 4 months of age demonstrated an enlarged mediastinal shadow (fig. 1) which was not seen on an earlier film (fig. 2).

The child was readmitted to the hospital at 1 year of age for cardiac evaluation. Chest film again revealed an enlarged mediastinal shadow. Physical examination revealed a pulse of 120 and respirations of 20/m. The cardiac murmur was no longer audible, but the heart appeared to be enlarged. The electrocardiogram was interpreted as normal. Digitalis therapy was discontinued and the child experienced no difficulty. The lack of the heart murmur and the absence of signs of congestive failure suggested that the mediastinal shadow might be of thymic origin. Prednisone, 10 mg. q.i.d. therapy for a week, was begun and subsequent chest films (fig. 3) revealed

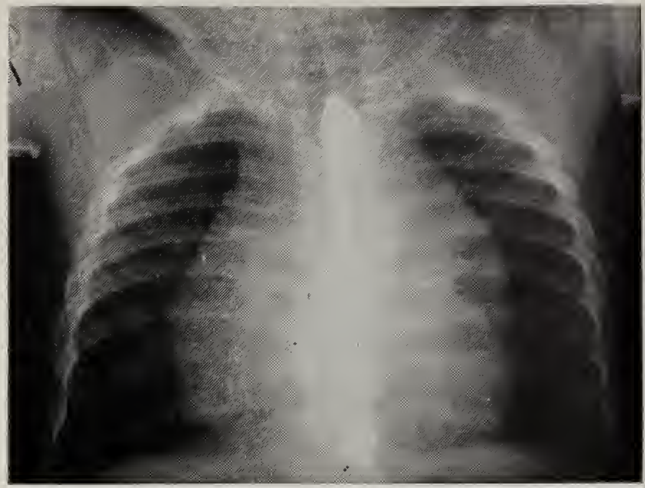

Fig. 1. Two months of age. Approximately six weeks after steroid therapy. No evidence of rebound thymic enlargement.

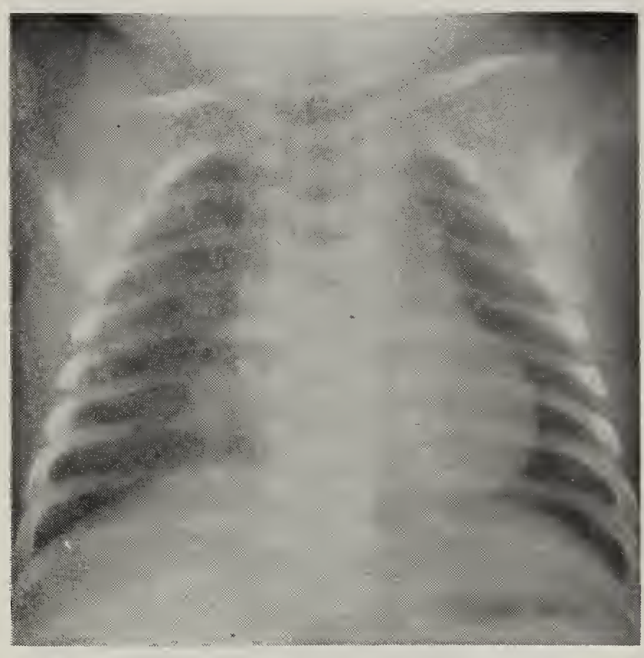

Fig. 2. Thirteen months of age, showing enlarged cardiothymic shadow present since the age of four months.

a remarkable shrinkage of the mediastinal shadow and normal cardiac configuration.

DISCUSSION

Even since the thymus gland was first mentioned by Rufus the Ephesian in the 1st Century B.C., there has been much speculation and many misconceptions concerning its normal anatomy, function and pathology. Radiographic evaluation of mediastinal size is difficult because of variation induced by the phase of respiration and intrathoracic pressure.[2] The normal thymic shadow has been variously misinterpreted as pleuritis,[3] partial atelectasis of an upper lobe, lymph node enlargement, cardiac enlargement or thymic tumor.[4]

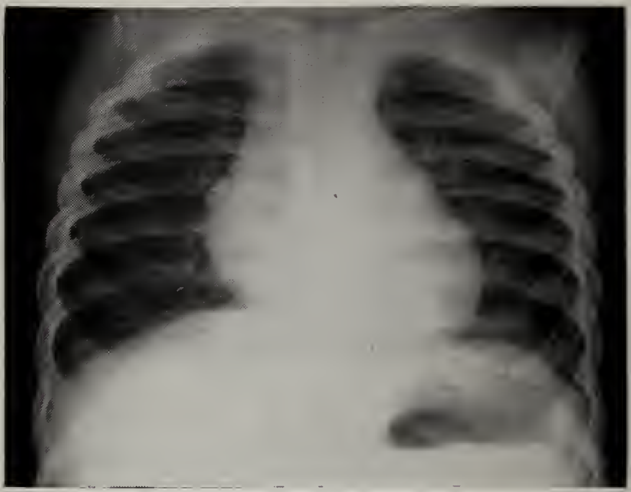

Fig. 3. Fourteen months of age. Two weeks after the second course of steroids. Note the normal mediastinal shadow.

The problem of the differentiation between thymus and cardiomegaly has been resolved in the past by the used of radiotherapy. The thymolytic effects of ionizing radiation were first utilized by Friedlander[5] in 1907 for the treatment of "status lymphaticus." Kinney[6] reported the use of radiation as an aid in the differentiation between a prominent thymic shadow and cardiomegaly in 1929. As late as 1953, the authors of a major radiologic text, in discussing the differential diagnosis of thymic mass, state: "An anterior superior mediastinitis and a congenital defect are the most frequent affections which must be taken into account in differential diagnosis. If the clinical situation is not clear, the most conservative and completely harmless test, if properly applied, is a therapeutic test irradiation. It begins an effective therapy in case the suspicion is confirmed. Hyperplasia of the thymus disappears quickly, even within a few days, with a small dose of x-rays."[7] Recent reports, however, implicating thymic irradiation with the later development of thyroid malignancy, make this a potentially hazardous procedure.

Soffer et al.,[8] first observed in 1952 a decrease in the thymic shadow followed by enlargement in four patients treated with ACTH. Porcelli[9] reported atrophy of large thymuses in 21 infants following adrenocorticotrophic hormone therapy; the thymus in most cases exhibited regrowth, but occasionally remained small. In the description of the "general adaptation syndrome," Selye[10] noted the involution of the thymus during conditions of stress. It is not uncommon to see marked involution of the thymus after such mild stress as an acute respiratory infection (figs. 4 and 5). Caffey[11] treated eight infants with Prednisone or triamcinolone who had large cardiothymic shadow, coincident with mild respiratory infections. The majority showed regression of the thymus in seven to 14 days, and following sudden withdrawal of the drug, the thymus enlarged, usually in about 14 days. Griffiths[4] has recently reported the value of steroid therapy in the differential diagnosis of the enlarged cardiothymic image.

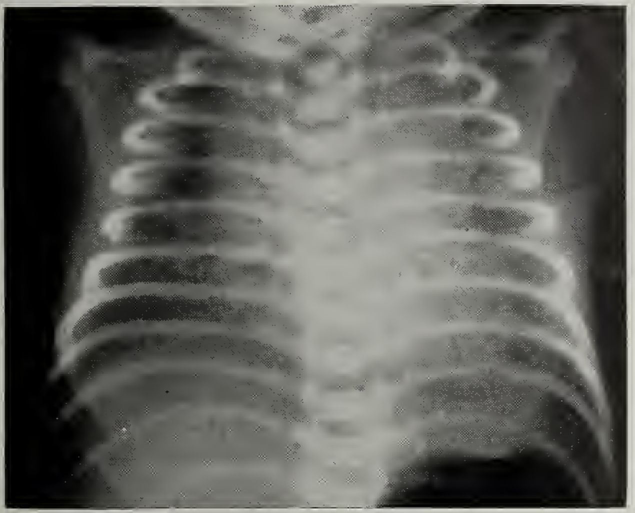

Fig. 4. Newborn with acute respiratory infection showing an enlarged mediastinal configuration.

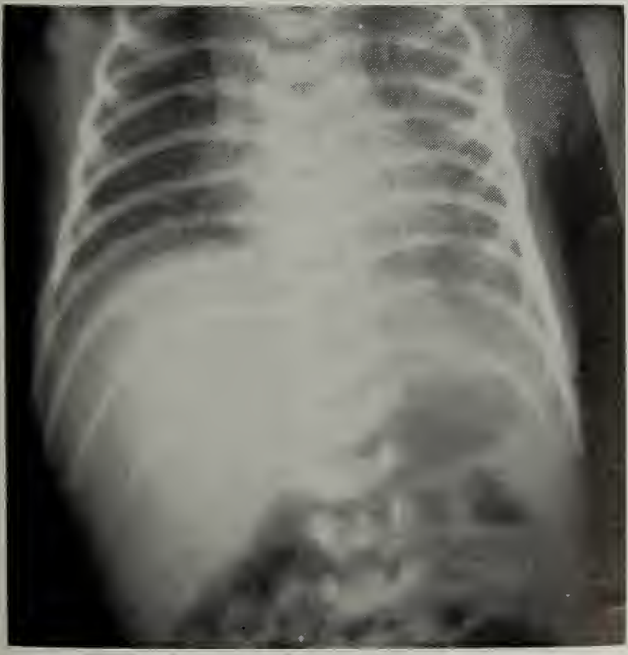

Fig. 5. Two days later. Note the significant reduction in mediastinal size due to thymic involution.

This case illuminates several concepts in the use of steroid therapy as a method of differentiating between cardiac and thymic enlargement. The infant probably developed an enlarged thymus as a result of rebound phenomenon following the ACTH therapy given on the fourth day of life. It is of interest to note that the gradual withdrawal of ACTH did not prevent this rebound reaction. The thymus was sensitive to the second course of steroid therapy. The symptoms of tachycardia, associated with an equivocal heart murmur, improved with digitalis therapy. Subsequently, the murmur was no longer heard. The persistent mediastinal enlargement shrank under steroid therapy, indicating that the enlarged image was probably due to thymus and not heart. The use of steroids in this case resolved the problems of suspected cardiomegaly.

SUMMARY

Steroid therapy produces rapid atrophy followed by regrowth or overgrowth of the thymus gland.

Gradual withdrawal of ACTH does not prevent the rebound phenomenon of overgrowth of the thymus.

The thymus is probably sensitive to more than one course of steroid treatment.

The case of suspected cardiomegaly was resolved by the use of steroid therapy.

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Endobronchial Foreign Body Simulating Pulmonary Neoplasm

Case Report

The importance of consideration of aspiration of foreign material into the tracheobronchial tree in any differential diagnosis of obstructive pulmonary disease is illustrated by a case report.

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INHALATION of foreign bodies continues to occupy an important place in the differential diagnosis of obstructive unilateral pulmonary disease. Although the presence of a foreign body should be easily detected in a patient giving a characteristic history, the following case report illustrates well how such an object may masquerade as a primary neoplasm of the lung despite careful preoperative evaluation.

A 64 year old white male, a retired power house operator, was admitted to Hines VA Hospital on Sept. 18, 1962 complaining of difficulty in starting his urinary stream for three years, weakness for four months and dyspnea on exertion for four months. He denied orthopnea, pedal edema, weight loss and chest pain. There was no history of fever or weight loss. He had had a mild cough for 15 to 20 years, productive of small amounts of sputum. There was no history of hemoptysis. He smoked approximately one half of a package of cigarettes a day up to 10 years ago, at which time he stopped. He drank 10 glasses of beer daily until two years prior to admission. The remainder of the history was non-contributory.

On physical examination of the chest, fatty breast tissue enlargement was noted. Bilateral rhonchi were present on auscultation of the lungs. The abdomen was obese and an umbilical hernia was present. A questionable fluid wave was felt. The liver was palpable one to two finger-breadths below the right costal margin. No masses were palpated. The prostate gland was smooth and symmetrically enlarged. The dorsalis pedis pulses were decreased in amplitude.

A chest roentgenogram revealed an area of homogeneous increased density in the right lower lung field obscuring the right heart border and the right leaf of the diaphragm and extending up to the eighth rib posteriorly. A 13 mm. round nodular density was noted in the right hemithorax peripherally and posteriorly.

Hemoglobin, hematocrit, leukocyte and differential counts were normal. The urinalysis was normal except for one plus albuminuria. A sputum culture revealed no pathogens. A urine culture grew streptococcus fecalis. Total serum protein was 8.1 grams per cent, albumin 2.6 grams per cent, globulin 5.5 grams per cent. A bromsulfalein test showed 15 per cent retention of dye. Serum bilirubin was 1.1 mg. per cent total and 0.2 mg. per cent direct. Cystoscopy performed on Sept. 20, 1962 revealed benign prostatic hypertrophy and stenosis of the right ureteral orifice.

On Oct. 4, 1962 a liver biopsy performed showed fatty metamorphosis with local septal fibrosis. Bronchoscopy on Oct. 8, 1962 revealed bilateral endobronchitis with obstruction of the right bronchus intermedius by polypoid tissue, distal to which was a black necrotic mass. A biopsy of the polypoid mass revealed severe chronic bronchitis with papillary hyperplasia and squamous metaplasia.

Pulmonary function tests disclosed a restrictive type of ventilatory defect. Vital capacity was 2.20 liters (54 per cent of predicted normal); one second timed vital capacity was 6.61 liters (73 per cent of normal); maximum breathing capacity was 43 per cent of normal and residual volume was 113 per cent of normal.

Bronchospirometry showed that the right lung carried 43 per cent of the total ventilation and 38 per cent of the gas exchange. Occlusion of the right or involved side revealed some decrease in ventilation but an equivalent amount of gas exchange equal to that of both sides.

Despite the lack of a preoperative tissue diagnosis or bronchogenic carcinoma, the possibility of this lesion was considered strong enough to warrant surgical exploration. On Oct. 18, 1962 an exploratory thoracotomy was performed. A large mass was present in the right lower lobe, adherent to the posterior chest wall by dense adhesions. Biopsy and frozen section of these adhesions revealed inflammatory tissue. Several enlarged lymph nodes in the subcarinal area were noted. The lesion appeared to involve the middle and upper lobes by direct extension, so it was decided to proceed with a pneumonectomy.

The superior vena cava on its right lateral aspect appeared to be involved by one of the greatly enlarged lymph nodes, so this margin of the vessel was sacrificed, repairing the defect with continuous silk vascular suture. The operative procedure was uncomplicated.

Pathologic Examination.—The right lung weighed 780 grams. The pleura over the lower lobe and focally over the upper lung was thickened and roughened by adhesions. On opening the bronchial tree a foreign body was found lodged in the bronchial lumen at the juncture of the bronchus intermedius and the lower lobe bronchus. This foreign body consisted of a portion of bone, roughly triangular with sharp irregular edges measuring 1.5 by 1.0 by 0.5 centimeters. The bronchial lumina, chiefly in the lower lobe, contained a large amount of thick mucous secretions and the lumina of the segmental bronchi of the lower lobe showed moderate cylindrical dilatation. There was no evidence of tumor. The entire lower lobe was airless, firm and consolidated, and on section showed a mottled brownish-gray surface.

The parenchyma of the upper and middle lobes was also subcrepitant and dark red, with patchy indurated airless areas, chiefly in the periphery and in the apical region.

In the peripheral lower portion of the upper lobe was a subpleural calcified nodule 1.5 cm. in diameter consistent with a healed granuloma. The large pulmonary arteries and veins were not remarkable. There were several enlarged rubbery lymph nodes, peribronchial and hilar, measuring up to 3 cm. in diameter. Some of the hilar lymph nodes contained several small caseocalcific granulomas. There was also one large lymph node, 4 cm. in diameter, with an attached portion of fibrofatty tissue; it was almost completely replaced by calcium with small patches of caseous material.

Several sections of the bronchi including the right main bronchus and the intermediate and lower lobe bronchi revealed severe chronic bronchitis with focal papillary and polypoid hyperplasia and focal squamous metaplasia. There was focal epidermization of the glandular epithelium. Occasional foci of ossification of the bronchial cartilage were noted. There was no evidence of malignancy. Sections of the lower lobe showed chronic inflammatory changes in smaller bronchi and bronchioles with extensive fibrosis and dense plasma cell infiltrates in the bronchial wall and peribronchial tissue.

There was partial collapse and extensive chronic fibrosing pneumonitis of the lower lobe parenchyma. The residual air spaces were filled with macrophages, many of which had abundant foamy cytoplasm. Other sections from the upper and middle lobes showed partial atelectasis, passive congestion and foci of hemorrhage and chronic pneumonitis with pleural reaction.

Histologic examination of several peribronchial and hilar lymph nodes revealed chronic lymphadenitis with reticuloendothelial and follicular hyperplasia. In some lymph nodes, there were discrete or coalescent granulomas with central caseous necrosis, calcific deposits and fibrous encapsulation. No acid fast bacilli or fungi were found on special stains.

The postoperative course was uneventful. The patient was dismissed on Nov. 1, 1962. On March 21, 1963 he was re-examined and had no complaints. Repeated questioning failed to elicit a history suggesting aspiration of food. Entry of a foreign body of this size into the trachea without the patient's knowledge must have required a semi-comatose state. Such may have been the case in this instance, though the possibility was denied by the patient.

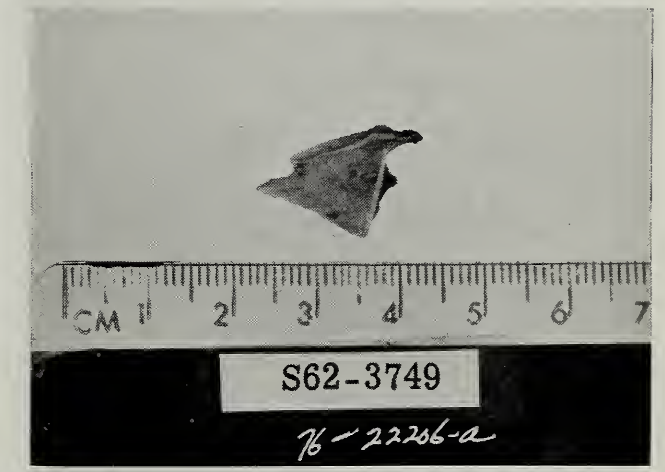

Fig. 1. Bone found lodged in right bronchus intermedius.

DISCUSSION

In a series of 1,026 consecutive cases reviewed by Holinger and associates[1] bones accounted for 20 per cent of 1,061 aspirated foreign bodies. Of 1,859 foreign bodies removed from the air passages by Jackson[7] 773 were bones. Entrance of this type of material into the tracheobronchial tree during eating is not a rare occurrence, even in the adult who denies any history of sudden coughing or dyspnea during eating. The presence of an endobronchial foreign body must always be considered in instances of unilateral obstructive pulmonary disease.

SUMMARY

Aspiration of foreign material into the tracheobronchial tree must be included in any differ-

(Continued on page 696)

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Medroxyprogesterone Test for Diagnosis of First Trimester Pregnancy

A Five Tablet Oral (Single Dose)

A single dose 50 mg. Medroxyprogesterone acetate (five tablets) ingestion is utilized as an accurate diagnostic test for early pregnancy. No laboratory equipment or animals are required and 95.5 per cent accuracy appears to be independent of season of year and of serum concentrations of chorionic gonadotrophic hormone. No untoward sequelae involving mother or fetus is apparent in any of the 70 women tested.

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UNTIL RECENTLY, all existing tests for secondary amenorrhea associated with pregnancy, hydatidiform mole or some malignant uterine tumors, were based wholly on biological, microscopic, immunologic or chemical laboratory technics. All were characterized by technical complexity, considerable expense to the patient and varying degrees of unreliability.

Since 1960, however, advantage has been taken of the immunologic properties of chorionic gonadotropin, the hormone produced by the new placenta and found in serum and in the urine (C.G.H.). If sensitized sheep red blood cells[1] or latex particles[2, 4] are suspended in urine to which chorionic gonadotropin antiserum has been added, agglutination occurs if chorionic gonadotropin is not present (i.e., if the patient is not pregnant). These tests require a minimum of laboratory equipment, may be set up in from three to five minutes and read in two hours with high degrees of accuracy.

The next step has been the elimination of the need for any laboratory equipment whatever, by taking advantage of the normal physiologic ability of orally active progestins to induce withdrawal bleeding in nonpregnant women, but not in pregnant ones.[6, 7] It is the purpose of this paper to report briefly experiences using this method of testing.

MATERIALS AND METHODS

The Five-Dose Test.—Thirty women ranging in age from 17 to 42 years were selected because of historical or physical evidence of possible early pregnancy. All but four were surely fertile, as shown by earlier pregnancies or the outcome of the present study. Ten other women in whom possibilities for pregnancy were remote were chosen as controls. Their age range was 17 to 42 years. Eight had been pregnant in the past; two had not. All of these were in the postovulatory stage of the menstrual cycle when they were brought into the study.

The following procedure was carried out in each case. A serum specimen was obtained for carrying out the "improved Friedman" pregnancy test in rabbits,[8] the male frog test[9] (Rana pipiens, October through May) or the Bufo toad test[10] (June through September). In some patients early in the study, serums were used for both rabbit and amphibian tests. Patients were given five 10 mg. tablets of medroxyprogesterone acetate* with instructions to take one immediately, then one daily for the next four days.

All subjects were then followed closely in order to determine the veracity of each of the three tests, and to observe fetal and maternal outcomes in those women who were indeed pregnant.

The Single-Dose Test.—At the conclusion of the controlled trial just outlined, it seemed reasonable to further simplify the test. Accordingly, 30 other women who were certainly or

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* Provera, brand of medroxyprogesterone acetate was supplied through the courtesy of Upjohn Company, Kalamazoo, Mich.

TABLE 1

RELATIONSHIP OF TEST RESULTS TO OUTCOME IN 30 PATIENTS GIVEN FIVE SEPARATE DOSES

Case No.	*Age*	*Multiparity*	*LMP*	*Date of F & F* and Start of Medication*	*Results of F & F Tests**	*Results of Progestin Test*	*Final Outcome*	*Relation Between Test Results*	*Comment*
1	21	II	3-30-61	6-12-61	Negative	Negative	Not preg.	Agree	
2	28	II	4- 2-61	6-12-61	Negative	Positive	Preg.	F & F wrong	
3	38	IX	4-15-61	6-13-61	Positive	Positive	Preg.	Agree	
4	34	III	4-23-61	6-13-61	Positive	Negative	Preg.	Proven wrong	Abor. 6-27-61
5	38	IV	4-11-61	6-23-61	Negative	Negative	Not preg.	Agree	
6	22	II	5-13-61	6-29-61	Negative	Positive	Preg.	F & F wrong	Del. Prem. 6 mo.
7	20	0	5-21-61	7- 6-61	Negative	Positive	Preg.	F wrong	Still-born
8	22	II	5-26-61	7- 6-61	Negative	Negative	Not preg.	Agree	
9	45	II	5-30-61	7-11-61	Negative	Negative	Not preg.	Agree	
10	24	III	4-19-61	7-28-61	Negative	Positive	Preg.	F wrong	
11	21	0	6-14-61	8- 3-61	Negative	Negative	Not preg.	Agree	
12	33	II	6-20-61	8- 4-61	Negative	Positive	Preg.	F wrong	
13	21	0	6-15-61	8- 4-61	Negative	Positive	Preg.	F wrong	
14	17	0	6- 7-61	8- 8-61	Negative	Positive	Preg.	F wrong	
15	18	0	7- 2-61	8-15-61	Negative	Negative	Not preg.	Agree	
16	27	III	6-30-61	8-15-61	Negative	Positive	Preg.	FF wrong	
17	22	II	7-14-61	8-29-61	Negative	Negative	Not preg.	Agree	
18	25	IV	7-13-61	9-14-61	Negative	Positive	Preg.	FF wrong	Spon. Com. Abor.
19	23	0	7-15-61	9-14-61	Positive	Positive	Preg.	Agree	
20	21	III	6- 3-61	9-19-61	Negative	Positive	Preg.	F wrong	
21	28	II	7-27-61	9-21-61	Negative	Positive	Preg.	F wrong	
22	29	0	8-18-61	9-28-61	Negative	Positive	Preg.	F wrong	
23	25	III	8-18-61	10-24-61	Positive	Positive	Preg.	Agree	
24	21	0	8- 4-61	11-22-61	Negative	Negative	Not preg.	Agree	
25	20	0	9-23-61	11-24-61	Negative	Positive	Not preg.	Proven wrong	
26	21	I	10- 1-61	11-26-61	Negative	Positive	Preg.	F wrong	
27	20	I	10-20-61	12- 1-61	Negative	Positive	Preg.	F wrong	
28	27	III	10-28-61	12- 5-61	Positive	Positive	Preg.	Agree	
29	21	0	10-28-61	12-10-61	Positive	Positive	Preg.	Agree	
30	31	III	10-31-61	12-28-61	Positive	Positive	Not preg.	Proven wrong	

* F & F = Frog and Friedman (Rabbit) tests for pregnancy.

probably pregnant were given the same amount (50 mg.) of medroxyprogesterone acetate, but as a single dose of five tablets. These ranged in age from 16 to 44 years and 19 had been pregnant one or more times before. Each pregnant subject was then followed to term.

RESULTS

The Five-Dose Test.—Pertinent data concerning the 30 study patients are set out in table 1. In this tabulation, the term "multiparity" refers to pregnancies occurring before the question of the present one arose. A "positive" medroxyprogesterone acetate test denotes absence of drug-withdrawal bleeding (i.e., pregnancy). A "negative" result means that vaginal bleeding did occur within three to seven days after completion of the test.

Ten women were not pregnant and two gave a false positive test (Nos. 25 and 30); frog and Friedman tests were correct in one of these, incorrect in the other. This result remains unexplained.

Of the 20 subjects who were pregnant, one "false negative" (No. 4) was observed; it seems likely she was already in the process of aborting spontaneously with complete abortion nine days after finishing the test. Frog and Friedman tests were correct.

What were results with the animal tests in this series? First, in all cases in which both rabbit and frog (or toad) tests were done, results were in agreement. In the 10 nonpregnant women results were erroneous in only one (No. 30). On the other hand, among the 20 pregnant subjects, 14 gave false negative frog and Friedman results.

Finally, results obtained with the progestin tests in the 10 subject control group are set out in table 2. It is readily apparent that all these women gave true negative tests.

Examination of the 17 full-term babies resulting from the 20 pregnancies in this series showed all to be physically normal. There was no evidence of masculinization in the nine female infants.

Comment

Although these are small series some conclusions appear to be justified. In terms of accuracy in nonpregnant subjects, the progestogen and the animal tests were equally accurate (90 per cent). Two unexplained false positive tests were noted after the hormone in the 10 study patients, none in the 10 control ones (2/20). One such result occurred with frog and Friedman tests among the 10 study patients (1/10).

The major superiority of the medroxyprogesterone acetate test appeared to be its accuracy when early pregnancy was indeed present. The single false negative result was observed in a woman who was apparently in the early stages of complete spontaneous abortion; it is questionable whether this should be classified as "false." In marked contrast, one or both animal tests were incorrect in 14 of the 20 pregnant study patients (70 per cent). As will be emphasized later, there are important reasons why false negative pregnancy tests are especially to be avoided.

The Single-Dose Test.—With 19 (and probably 20) correct tests in 20 pregnant women, and 18 of 20 correct in nonpregnant ones, it was decided to simplify further the oral testing regimen. Accordingly, 30 additional women with secondary amenorrhea were given 50 mg. of medroxyprogesterone acetate as a single oral dose. Pertinent data are presented in table 3. Five were not pregnant and all responded to the hormone test with vaginal bleeding three to seven days after the 50 mg. dose. In contrast, the frog and Friedman tests were incorrect in one (No. 13).

Among the 25 women who were pregnant the oral hormone test was positive (correct) in all but one (No. 22). This patient did bleed, but she was in process of having a complete abortion so in one sense the test result was correct. Two false negative Friedman tests were noted and in one of these (No. 10) repetition 20 days later gave a positive rabbit test. Again, the 23 babies delivered from the women in this series were all healthy. None of the 10 female infants showed evidences of masculinization.

Comment

The high degree of accuracy of the endocrine test was not compromised by giving the drug as a single dose. The major difference between results seen in this series and the first one was in the animal tests. These were correct in only seven of the 20 pregnant women in the original series (35 per cent). In the recent series, 23 of 25 were correct (92 per cent). One explanation may have been that the former tests were done during the warmer months of the year when male frogs are less responsive to C.G.H.[9] It was also noteworthy that women in the former series were generally further along in their pregnancies, with reduced concentrations of circulating gonadotrophic substances in their serums, than were the women in the single dose series.

Conclusions

Among the several attributes which recommend the 50 mg. single-dose medroxyprogesterone test, simplicity ranks high. Neither laboratory equipment nor animals are required, thus promoting economy. Brevity also is a characteristic; from the physician's standpoint, the time required is that needed to write out a prescrip-

TABLE 2

CONTROL SERIES

Case No.	*Age*	*Multiparity*	*LMP*	*Date of Medication*	*Onset*	*Result*
1	23	II	8- 7-62	8-25-62	2 day	Menses—after medication
2	37	III	8-16-62	9- 3-62	4 day	Menses—after medication
3	18	0	8-20-62	9- 7-62	3 day	Menses—after medication
4	17	0	8-25-62	9-13-62	4 day	Menses—after medication
5	26	I	9- 1-62	9-20-62	5 day	Menses—after medication
6	30	II	9- 3-62	9-20-62	3 day	Menses—after medication
7	42	VII	9- 4-62	9-19-62	4 day	Menses—after medication
8	33	III	10- 1-62	10-16-62	6 day	Menses—after medication
9	28	IV	10- 5-62	10-21-62	5 day	Menses—after medication
10	21	I	10-10-62	10-25-62	5 day	Menses—after medication

TABLE 3

SUMMARY OF 30 CASES GIVEN SINGLE DOSE (50 mg.) PROVERA

Case No.	*Age*	*Multi-parity*	*LMP*	*Date of Friedman and Start of Medication*	*Results of F Test*	*Results of Provera Test*	*Final Diagnosis*	*Result*	*Comments*
1	31	II	1- 5-62	3- 5-62	Positive	Positive	Preg.	Agree	
2	30	I	1-15-62	3- 6-62	Positive	Positive	Preg.	Agree	
3	40	I	1-19-62	3- 8-62	Positive	Positive	Preg.	Agree	
4	44	IV	12-18-61	3- 8-62	Negative	Negative	Not preg.	Agree	
5	25	II	1-11-62	3- 8-62	Positive	Positive (Bleeding 3-19-62)	Preg.	Agree	D&C 3-23-62 Incomplete
6	21	I	12-29-61	3-15-62	Negative	Negative	Not preg.	Agree	
7	20	0	1-27-62	3-19-62	Positive	Positive	Preg.	Agree	
8	22	0	2-11-62	3-20-62	Positive	Positive	Preg.	Agree	
9	22	III	2-10-62	3-20-62	Positive	Positive	Preg.	Agree	
10	28	0	2- 9-62	3-20-62	Negative	Positive	Preg.	F wrong	Repeat F 3-29-62 Pos.
11	21	0	1-20-62	3-22-62	Positive	Positive	Preg.	Agree	
12	20	I	2-15-62	4- 1-62	Positive	Positive	Preg.	Agree	
13	31	IV	2-12-62	4- 3-62	Positive	Negative	Not preg.	F wrong	
14	31	V	2-21-62	4- 5-62	Positive	Positive	Preg.	Agree	
15	22	I	2-15-62	4-10-62	Positive	Positive	Preg.	Agree	
16	33	VI	3- 2-62	4-19-62	Positive	Positive	Preg.	Agree	
17	16	0	2-28-62	4-23-62	Positive	Positive	Preg.	Agree	
18	32	IV	3-15-62	4-24-62	Positive	Positive	Preg.	Agree	
19	17	0	4- 4-62	5-15-62	Positive	Positive	Preg.	Agree	
20	21	I	4- 1-62	5-17-62	Negative	Negative	Not preg.	Agree	
21	32	VIII	3-18-62	5-17-62	Positive	Positive	Preg.	Agree	
22	29	III	3- 7-62	5-17-62	Positive	Negative	Preg.	Provera wrong	5-22-62 Spotted 5-24-62 Com. Abor.
23	19	0	4- 1-62	5-17-62	Positive	Positive	Preg.	Agree	
24	19	0	3-11-62	5-22-62	Positive	Positive	Preg.	Agree	
25	38	IV	4-21-62	5-29-62	Positive	Positive	Preg.	Agree	
26	29	II	4- 9-62	5-31-62	Negative	Positive	Preg.	F wrong	
27	27	II	4-15-62	6- 2-62	Positive	Positive	Preg.	Agree	
28	26	0	4- 5-62	6- 5-62	Positive	Positive	Preg.	Agree	
29	21	0	4-19-62	6-15-62	Positive	Positive	Preg.	Agree	
30	22	0	6-10-62	8- 6-62	Negative	Negative	Not preg.	Agree	

tion. Accuracy was noteworthy in this study. Among 45 women who were pregnant this test was accurate in all except two who were undergoing spontaneous abortions. (This performance of 95.5 per cent compared well to biological test results in the same women: 66.7 per cent.) Of 25 nonpregnant women given the hormone, 23 responded as expected (92.0 per cent), as compared to only 13 of 15 (86.6 per cent) biological test results. Further, accuracy appeared to be independent of season of the year and of serum concentrations of C.G.H. And finally its safety recommends it; it depends solely on normal physiologic processes in women, and there was no evidence of masculinization in the 19 female infants studied or in other clinical applications of medroxyprogesterone acetate.[11]

Finally, the hormone test was regularly reliable in women only four or five weeks pregnant or possibly pregnant.

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WALTER HARVEY JACOBS, M.D.; GEORGE DEVINS, M.D.,
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Complications of Gastric Freezing in The Treatment of Duodenal Ulcer

Careful follow-up of six patients who had undergone seven gastric freezing procedures in the prescribed manner revealed a high incidence of complications: gastric ulcer, diaphragmatic pain, abdominal pain, stomach bleeding, paralytic ileus. As a result, the authors have discontinued the procedure and await the results of a double-blind controlled study proving the safety and value of gastric freezing.

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Dr. O. H. Wangensteen and associates have devised the technic of circulating alcohol, cooled to a temperature below the freezing point of water, through the stomach. They have reported their experience in the *Journal of the American Medical Association*[1, 2] and elsewhere[3] as achieving physiologic gastrectomy by gastric freezing. Our concern regarding this technic led us to organize a controlled study at the Menorah Medical Center in Kansas City, Mo. Early experience with the freezing procedure led us to abandon this study. The purpose of this paper is to demonstrate why we have discontinued gastric freezing.

Patients and Methods.—All patients in this study were chosen because they had an active duodenal or marginal ulcer and had had some complication of peptic disease. Furthermore, most had some other ailment encouraging us to look for a successful therapeutic technic with a lower morbidity and mortality than surgery. The patients in this study were all seen as in-patients at the Menorah Medical Center. Their ages, complications of ulcer, other associated medical conditions plus the complications of the gastric freezing, are depicted in table 1. A summary of the complications is listed in table 2. The O.E.M. machine was used to accomplish the procedure. All in-flow temperatures were maintained between –17 and –20 centigrade. Balloons in whole stomachs were filled with approximately 600 ml. of alcohol. The duration of the gastric freeze in every situation was 60 minutes. Calibration of the pump revealed that approximately 450 ml. of alcohol was circulated per minute.

Case reports of the three patients, with documented gastric ulcers following the gastric freeze, are presented.

Case Reports

R. M., a 39 year old white male surgeon was admitted to the Menorah Medical Center for the first time on Oct. 24, 1962. He had had persistent epigastric pain for three months. Physical examination revealed moderate epigastric tenderness. X-rays demonstrated a duodenal bulb crater. Gastric analysis (table 3) revealed a basal specimen containing 46 meq./L. free hydrochloric acid rising to 99 meq./L. with standard (0.01 mg./kg.) histamine stimulation. The patient was hospitalized for a period of three weeks, receiving a convalescent ulcer diet, meprobamate and tridihexethyl chloride tablets, q.i.d., and magnesium-aluminum hydroxide gel, 10 ml. q 2 hours while awake. He was dismissed from the hospital on Nov. 11, 1962. Although still present, the epigastric pain was reduced as to frequency and severity. Epigastric pain became more severe and he was readmitted on Feb. 28, 1963. Physical examination again revealed epigastric tenderness. X-ray revealed persistence of the duodenal ulcer crater. Gastric free hydrochloric acid content rose to 107 meq./L. with insulin stimulation.

Gastric freezing was performed using the O.E.M. machine with an in-flow temperature of –20 C.; outflow temperature of –12 C. for a one hour period. The day of the freezing procedure the patient felt quite well other than for minimal left upper quadrant abdominal cramping. However, for one week following, he experienced persistent left upper quadrant abdominal cramping and had daily episodes of vomiting small amounts of bright red blood. Despite this, there was no drop in hemoglobin. Serum amy-

TABLE 1

IN-PATIENTS

Case	*Ulcer Complications*	*Associated Diseases*	*Prefreeze X-Rays*	*Freeze Technic*	*Freeze Complications*	*Post-Freeze X-Rays*	*Gastroscopic Findings*
R. M.	Intractable pain	None	Duodenal crater	O.E.M. machine inflow −20 C. outflow −12 C. 60 minutes	1. Hematemesis 2. Left upper quadrant abdominal pain 3. Gastric ulcer	New gastric scar No duodenal crater	
M. F. 62	Intractable pain Bleeding	Hypertensive cardiovascular disease	Duodenal crater	O.E.M. machine inflow −19 C. outflow −12 C. 60 minutes	1. Infarct of diaphragm 2. Paralytic ileus 3. Massive gastric slough	Atonic stomach No duodenal crater	
F. R. 40 Male	Intractable pain Bleeding	Colectomy for ulcerative colitis Gastrectomy for duodenal ulcer	Marginal ulcer	Swenko machine inflow −18 C. outflow −12 C. 60 minutes	1. Diaphragmatic pain 2. Gastric ulceration	Persistent marginal ulcer	Multiple superficial gastric ulcerations
L. B. 50 Female	Intractable pain	Thoracoplasty for TBC Marked obesity	Duodenal crater	O.E.M. machine inflow −17 C. outflow −12 C. 60 minutes	None	No duodenal crater	
W. L. 50 Male	Intractable pain	Buerger's disease	Duodenal crater	O.E.M. machine inflow −19 C. outflow −12 C. 60 minutes	1. Epigastric pain for one week	No duodenal crater	
J. H. Male	Intractable pain	Coronary artery disease	Marked duodenal deformity	O.E.M. machine inflow −19 C. outflow −12 C. 60 minutes	1. Melena 2. Abdominal wall hypaesthesia	No change	

TABLE 2

SUMMARY OF COMPLICATIONS

1. Abdominal pain	3 of 7 Freezes
2. Abdominal hypaesthesia	1 of 7 Freezes
3. Diaphragmatic pain	2 of 7 Freezes
4. Paralytic ileus	1 of 7 Freezes
5. Hematemesis	1 of 7 Freezes
6. Melena	2 of 7 Freezes
7. Proven gastric ulcer	3 of 7 Freezes

lase and lipase determinations during the week following the freezing procedure were within normal limits. A follow-up x-ray three months following the freezing procedure revealed complete healing of the duodenal ulcer. At this time the patient was completely asymptomatic. An interesting radiographic observation (fig. 1b) was the presence of gastric rugae radiating to one spot on the posterior wall of the body of the stomach. These were indicative of a healed gastric ulcer, and were not present prior to the freezing procedure (fig. 1a). Post-freezing gastric secretion studies revealed no decrease in hydrochloric acid in response to histamine stimulation or to insulin stimulation.

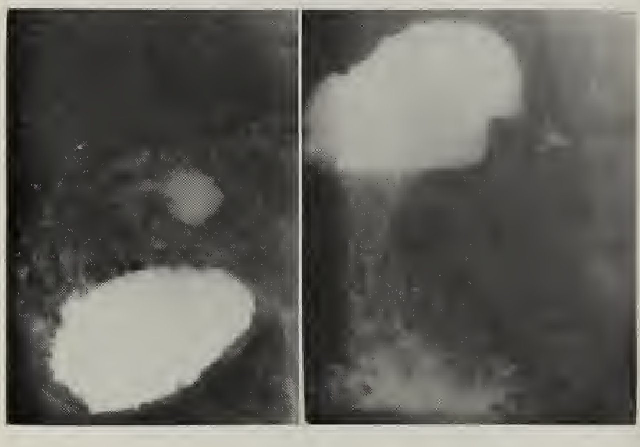

Fig. 1. a. Patient R. M., prefreeze stomach x-ray. b. Post-freeze stomach x-ray. Note radiation of folds to ulcer scar.

In August of 1963 (six months following the freezing procedure) the patient experienced symptoms indicative of a recurrence of peptic ulcer disease. X-rays indicated a deformed duodenal bulb but no crater was demonstrated.

M. F., a 62 year old white male, was admitted to the Menorah Medical Center on April 25, 1963 with a two day history of melena. He had had a bleeding duodenal ulcer seven years before, and had vague digestive complaints for several months prior to admission.

Physical examination revealed a pallid white male with a ventricular rate of 100. Peripheral blood volume was reduced to 55 cc. per kilogram. Three blood transfusions were administered during the first three days of his hospitalization. This was supplemented by an ulcer diet and antacid therapy. X-ray revealed a post-bulbar duodenal ulcer.

One week following the patient's admission, after the stool had become light in color, a second episode of melena occurred. There was a slight drop in the patient's hemoglobin, which subsequently rose to a normal value.

On May 9, 1963 gastric freezing was performed, using the O.E.M. machine with an inflow temperature of minus 19 degrees for 60 minutes. The patient tolerated the procedure well. Three hours following the procedure, he became aware of severe pain in the left upper portion of the abdomen, the left anterior chest, with radiation to the left shoulder. The pain was worse on deep breathing. During the subsequent two days, his abdomen became distended. Bowel sounds were hypoactive. Flat plate of the abdomen (fig. 2) showed distended jejunal loops with thickened walls. The presence of free fluid within the abdominal cavity was suggested. The diaphragmatic pain and abdominal distention gradually subsided. The patient was dismissed from the hospital improved on May 16, 1963.

TABLE 3

GASTRIC ACID SECRETION

	Maximal Acid Concentration After Insulin (Meq./L.)		*Maximal Acid Concentration After Histamine (Meq./L.)*		*Acid Output After Maximal Histamine Stimulation (Meq. 1 hr.)*	
	PRE-FREEZE	POST-FREEZE	PRE-FREEZE	POST-FREEZE	PRE-FREEZE	POST-FREEZE
W. L. (M)		105	121	127	27	40
R. M. (M)	111	110	111	108		32
L. B. (F)	54	51	104	51	10	9
J. H. (M)	100	83 (vagotomy)	116	83		28
M. F. (M)	129	88				4
F. R. (M) (subtotal gast.)		24				

He was readmitted on May 24, 1963 (15 days after the freeze) because of massive melena. Initial blood volume determination revealed 57 ml. per kilogram. The patient was treated with blood transfusions; however, because of inability to control bleeding, emergency surgery was performed. At the time of operation, a large hematoma was observed in the left leaf of the diaphragm. There was some edema of the wall of the proximal small bowel and a subserosal hemorrhage in the stomach. The duodenum was opened and the duodenal ulcer was observed to be healed. Gastrotomy revealed a large hematoma within the stomach cavity. Large confluent ulcerations involving the upper one third of the stomach were observed. The bleeding sites in the proximal stomach were ligated and the stomach was closed. A vagotomy was performed. There was a severe febrile course postoperatively; however, with good response to antibiotic therapy, the patient was dismissed from the hospital on June 17, 1963. At the time of dismissal he was comfortable other than for postprandial bloating. A section of the clot from the stomach is demonstrated (fig. 3) and high power magnification (fig. 4) shows that it contained smooth muscle fibers indicating the depth of the gastric slough.

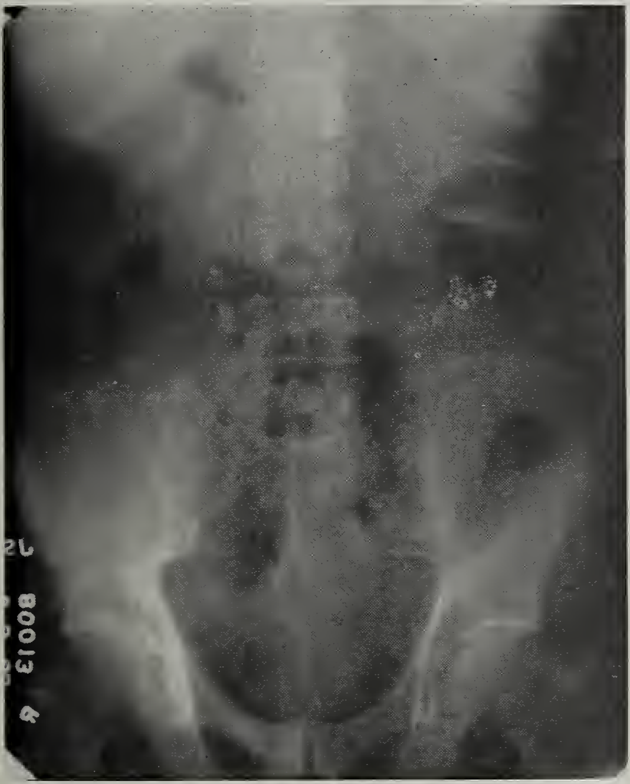

Fig. 2. Patient M. F., flat plate of abdomen post-freeze. Note dilated jejunal look with thickened wall.

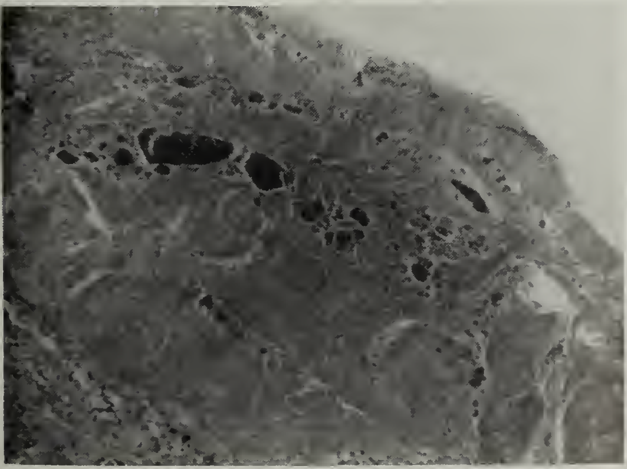

Fig. 3. Patient M. F., low power magnification of blood clot found in stomach post-freeze. × 32.

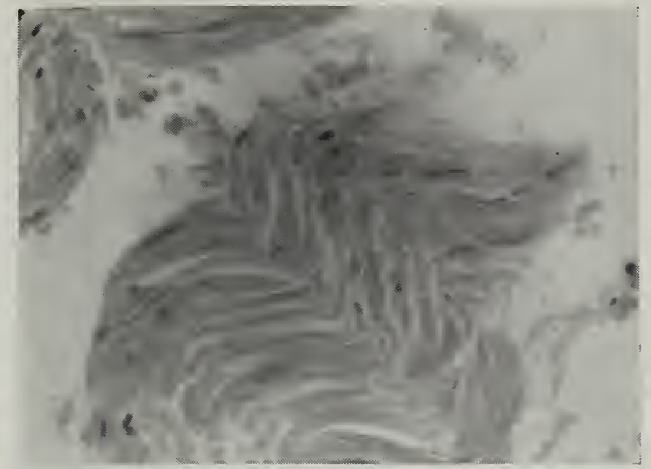

Fig. 4. Patient M. F., high power magnification of blood clot from stomach showing presence of smooth muscle fibers. × 125.

Since the operation he has remained well and has no digestive complaints. Follow-up roentgen studies revealed the dilated atonic upper one-third of the stomach (fig. 5a, b). A recent maximal histamine test showed relatively low values for gastric secretion (table 3).

F. R., a 40 year old white male was admitted to Menorah Medical Center for the sixth time, on April 24, 1963 with a five hour history of upper abdominal pain radiating straight through to the back. In the

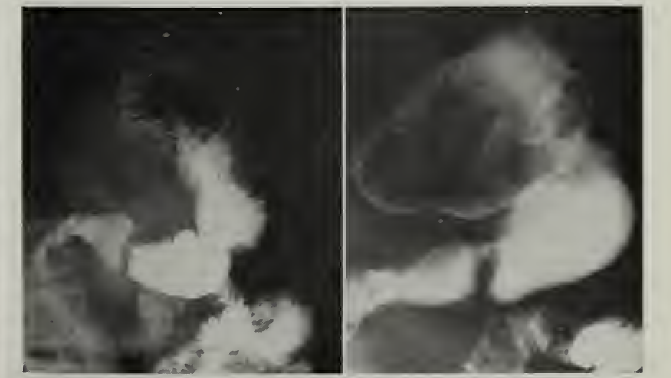

Fig. 5. a. Patient M. F., prefreeze stomach x-ray. b. Post-freeze x-ray showing dilated upper one third of stomach.

past this patient had undergone total colectomy for ulcerative colitis and subsequently a subtotal gastrectomy for a bleeding duodenal ulcer. Since the gastrectomy he had been hospitalized five times because of severe abdominal pain and melena. X-rays showed a large marginal ulcer. The patient underwent a gastric freeze at another institution in September of 1962. He tolerated this procedure well and was asymptomatic for approximately six weeks. However, ulcer pain recurred and the ulcer persisted on x-rays. In April, 1963, gastric freeze was repeated at still another hospital at –18 C. inflow for 60 minutes using the Swenko machine. Following the freeze the patient complained of severe upper abdominal and lower thoracic pain radiating to the left shoulder, aggravated by breathing. Chest x-ray was normal and the pain gradually subsided over 48 hours. There was moderate relief of the patient's ulcer pain and he was home until the day of admission when the abdominal pain suddenly increased in severity. (It should be noted that he did not adhere to any prescribed ulcer program.) On admission, marked guarding and epigastric tenderness were detected. Bowel sounds were active. Flat film of the abdomen demonstrated no free air or abnormal gas shadows. Initially serum amylase and lipase determinations were normal. Treatment with narcotics and parenteral feeding was followed by marked improvement. Upper gastrointestinal x-rays demonstrated a large marginal ulcer (fig. 6). On gastroscopy a large ulcer in the jejunum at the stoma and several superficial gastric ulcerations were noted. Despite transient azotemia the patient improved on a program of bland diet and antacids and was dismissed on May 25, 1963. Follow-up x-rays have shown no evidence of the marginal ulcer (since adherence to a program of diet and antacids).

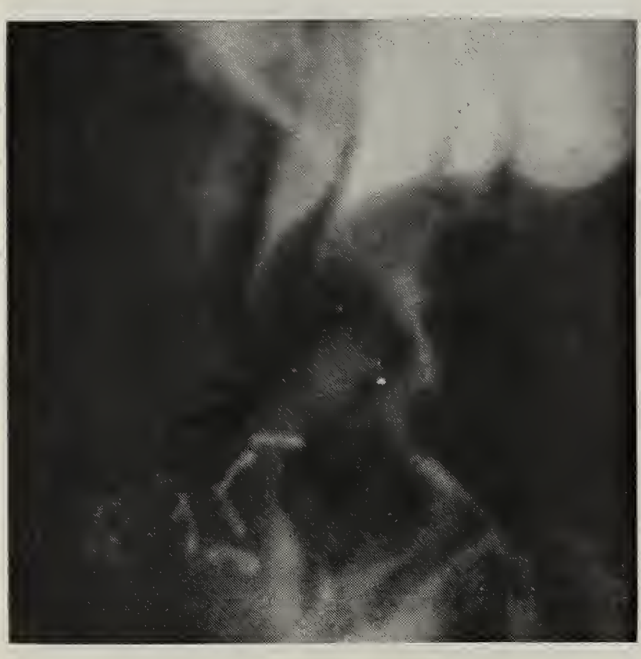

Fig. 6. Patient F. R., marginal ulcer.

Discussion

At the 1963 meeting of the American Gastroenterological Association the subject of gastric freezing was discussed by a special panel. Bernstein[4] reported that in more than 1,100 gastric freezing procedures there was no mortality, immediate pain relief in 85 to 90 per cent and profound significant acid suppression in 70 per cent with achlorhydria not being uncommon. The complications i.e., gastric ulcer and upper gastrointestinal bleeding, were reduced by lowering the freezing time to 45 minutes.

The experience of Klotz,[5] and Ruffin[6] was different. In no case was achlorhydria observed and acid secretory suppression appeared to be insignificant or temporary. Klotz noted that, in addition to gastric ulcer and melena, other complications of the procedure were transient episodes of vascular collapse, alleviated by emptying the gastric balloon; and electrocardiographic changes (primarily ST segment and T-wave changes) which persisted in 10 per cent of cases for 24 hours following the freeze.

Hallenbeck[7] and associates reported experiments in dogs and pigs. They concluded: (a) the temperature of the alcohol circulating through the refrigerating machine gives no idea of the actual temperature in the stomach wall, (b) whenever portions of stomach are frozen solidly, necrosis of gastric tissue occurs and this is followed by a slough, (c) actual gastric freezing tends to be focal rather than general in all but tiny animals, and (d) the hard stomach felt on palpation after a freeze is usually due to a shell of frozen gastric contents rather than to frozen stomach wall. The results of the Mayo Clinic Group were recently published.[8]

Complications of gastric freezing have been reported by others. Heineken et al.[9] reported that mild complications were present in nine out of 10 cases subjected to the procedure. These included minor electrocardiographic changes and transient syncope. Welch[10] described a fatality following the procedure. Grossman[11] reported "the following complications have been reported: ulcers of the stomach, perforation of the stomach, bleeding from the stomach (sometimes massive), impaired emptying of the stomach, necrosis of the gastric wall, and a postfreezing symptom complex. Some of these complications have been fatal."

Colcher,[12] who performed gastroscopic examinations following gastric freezing, reported early changes of erythema and marked exudate which appear following the freeze disappear quickly.

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Metacarpal Fractures

Metacarpal fractures are second only to fractures of the phalanges in incidence.* The first metacarpal forms the base of the thumb, rotates and is anatomically unique. First metacarpal fractures differ from the other metacarpal fractures.

The second, third, fourth and fifth metacarpals are anatomically and functionally similar, and fractures of these metacarpals, in general, may be considered together.

Metacarpal fractures may be classified as to the mechanism of injury. Metacarpal fractures are commonly due to direct trauma, secondary to a crushing injury of the hand, and also occur as the result of boxing injuries. Multiple metacarpal fractures are common.

TABLE 1

FORTY-TWO PATIENTS WITH 58 METACARPAL FRACTURES

First Metacarpal	*Per Cent*
3 with associated dislocation	5
4 without associated dislocation	7
Second Metacarpal	
5 fractures	8
Third Metacarpal	
3 fractures	5
Fourth Metacarpal	
4 fractures	7
Fifth Metacarpal	
15 fractures (mostly boxer's fractures)	26
Multiple Fractures	
24 fractures in 8 patients.	41
These were severe injuries with tendon, nerve, muscle damage, e.g., meat grinder injury, car fell on hand, etc.	

Metacarpals articulate distally with the phalanges and proximally with the carpal bones. The anatomical arrangement of the ligaments on the volar and dorsal surfaces of the second, third, fourth and fifth metacarpals is of sufficient strength that usually the bone is fractured rather than a dislocation occurring at the metacarpal carpal joint. Dislocations of the metacarpal carpal joints of two through four are unusual. When they occur, they are usually easily reduced by traction and direct pressure over the deformity. Neglected cases may require open reduction, if not reduced soon after the injury.

The first metacarpal carpal joint is a complicated one. Rotation, flexion, extension, adduction and abduction all occur in this joint. Since the joint is designed for motion, and not stability, fractures and dislocations through this joint are common. Difficulties in both reduction and recovery of function occur.

The treatment of metacarpal fractures by manipulation and skin traction is recommended and discussed; the indications and technics of open reduction are discussed.

Dislocations of the Metacarpal Carpal Joints

Dislocations of the metacarpal carpal joints are uncommon. When they occur, the reduction is usually accomplished using a little traction and direct pressure over the base of the metacarpal. A few weeks of immobilization with casting after reduction is the only treatment necessary. Dislocation of the metacarpal carpal joint of the thumb is a special case and will be discussed later under fractures and dislocation of the first metacarpal.

Fractures of the metacarpals, two through five, are common. It has been mentioned that these are usually due to direct trauma. If trauma occurs in a longitudinal direction, the neck of the metacarpal near the metacarpal phalangeal joint will usually fracture. This is a so called "Boxer's injury." The fracture is usually oblique and the angulation is toward the palmar aspect with the apex dorsally. Fractures through the neck of the metacarpal are usually reduced by correcting rotation, flexing the finger at the metacarpal phalangeal joint and pressing the phalanges dorsalward with the fingers flexed. Local anesthesia is usually satisfactory. A short arm

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* This refers to hand fractures. When fractures of the metacarpals are considered with fractures of the phalanges, these are the commonest of all fractures.

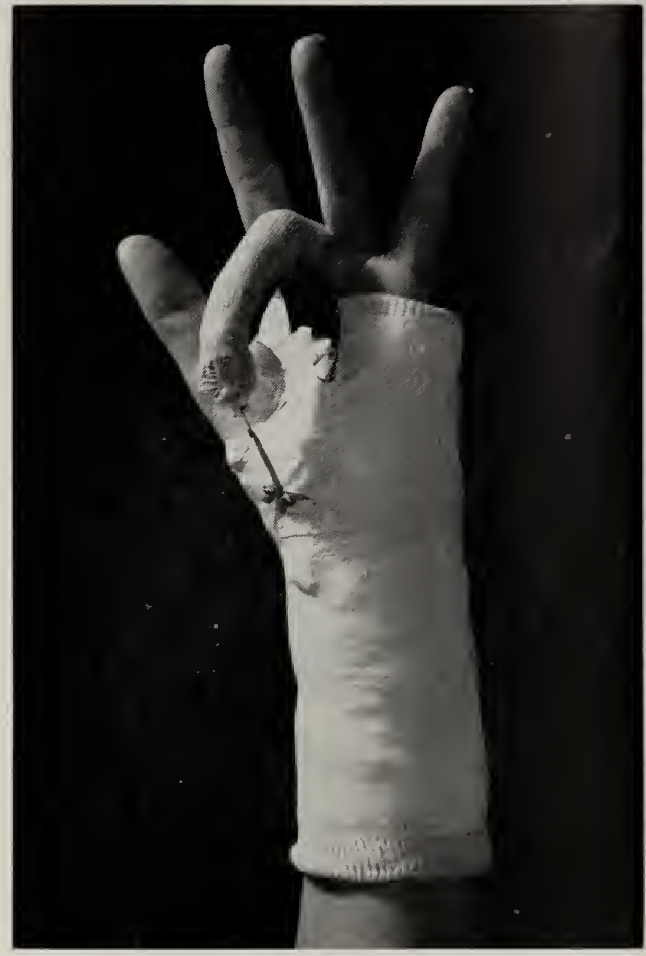

Fig. 1. Treatment of a fractured shaft of metacarpal by skin traction. Note rotary deformity if present (1) is corrected, (2) traction applied in direction of tuberosity of navicular, (3) finger is flexed, (4) traction applied to finger using collodian as the adhesive, using finger stockinet, (5) local anesthesia is usually satisfactory and is injected dorsally into fracture site (1 per cent without adrenalin).

cast, applied before attempting reduction, stabilizes the metacarpal carpal joint and facilitates reduction. After reduction, a well padded plaster splint to the finger should be applied to maintain the reduction with the finger flexed. Heavy pressure should not be placed on the finger as this will cause necrosis of tissue. Three and one half weeks of immobilization are usually sufficient for this rather common fracture.

Fractures through the shaft of the metacarpal may be stable or unstable. Unstable and comminuted fractures through a metacarpal shaft theoretically imply traction. Skin traction is preferable to skeletal traction (fig. 1). Traction, in my experience, frequently has not been satisfactory in reducing these fractures. If a fracture is oblique or comminuted and a good reduction cannot be obtained and maintained, these fractures should have an open reduction and internal fixation of the fracture. Internal fixation is not difficult. A small Steinman pin supplemented, if necessary, by an encircling wire will usually suffice. The fracture is exposed through a vertical incision, the pin driven retrograde, the fracture reduced, and then the pin is driven across the fracture site. The end of the pin is buried subcutaneously.

Open Reductions of Metacarpal Fractures

Open reductions of metacarpal fractures are frequently desirable, the usual indication being an unsatisfactory closed reduction. A vertical incision on the dorsum of the hand is made approximately one and one half inches in length. Open reduction is accompanied by internal fixation. A Steinman pin supplemented, if necessary, by a wire loop is used (fig. 2).

The management of multiple metacarpal fractures, with, or without tendon injury is frequently best managed by open reduction and internal fixation of the fracture (fig. 3).

Fractures near the joints, not reducible by closed methods, are sometimes best “fixed,” after reduction, by several “K” wires (fig. 4).

Open reduction has been done in our clinic, only in the presence of undamaged skin and occasionally a few clean, compound fractures. Open reduction presumes the skill and equipment to carry it out successfully.

Malunions of Metacarpal Fractures

Malunions of metacarpal fractures are common; a malunion is frequently compatible with good function. It is not generally known that a fracture through the neck of the metacarpal, the so called Boxer’s fracture, which heals with 20 to 25 degrees of angulation is frequently compatible with almost normal function. The reason for this appears in no textbook of fractures, but is obvious from examination of one’s own hand. If one extends the fingers at the metacarpal phalangeal joint, it will be noted that approximately 30 degrees of hyperextension is possible. This degree of hyperextension is usually more marked in the fifth finger than in the fourth finger. The amount of hyperextension present in the metacarpal phalangeal joint of the opposite and uninjured hand indicates the amount of angulation which is acceptable, although none is desirable. Less angulation in the second, third and fourth metacarpals through the neck is acceptable because usually a lesser degree of hyperextension is present in these metacarpal phalangeal joints. Fifteen to 20 degrees of angulation is frequently acceptable, with slight shortening, but no rotary deformity, in the metacarpal shaft fractures. Weakness of grip is secondary to interference

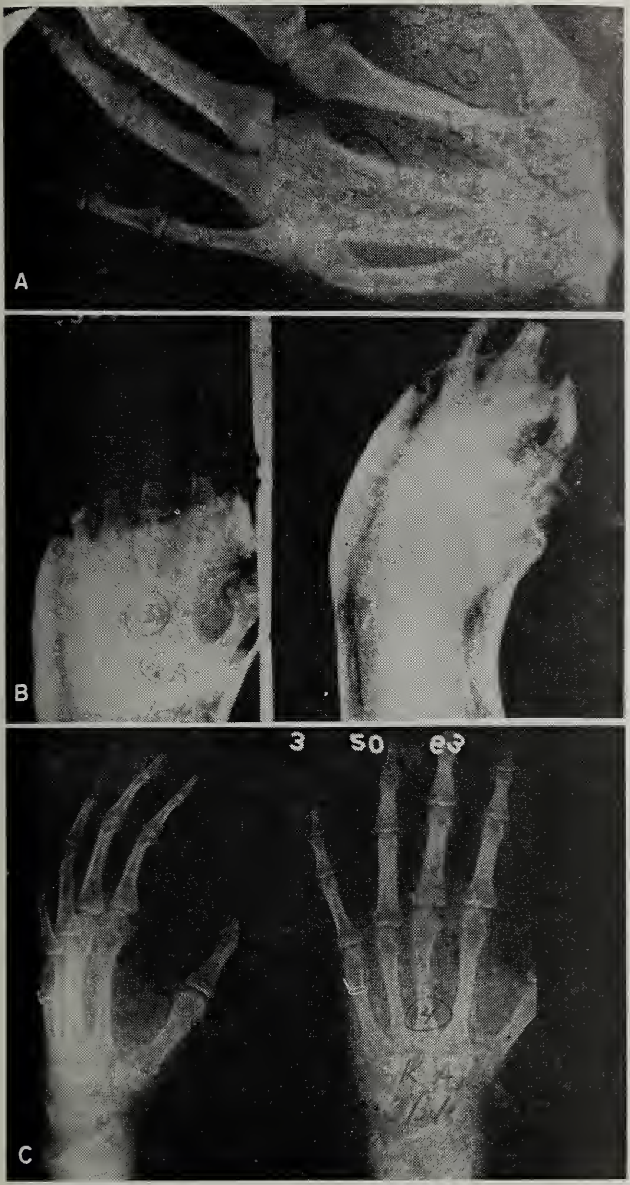

Fig. 2. A. An unstable fracture of metacarpal shaft. Unsatisfactory reduction via manipulation and traction. B. Fracture exposed through vertical incision; extensor tendon identified (operation done under tourniquet). Open reduction with small "5/64" Steinman pin. Small encircling wire added for greater stability. C. Pin removed four weeks later under local anesthesia. Finger and hand function normally. X-ray approximately six weeks postoperatively. Wire is asymptomatic.

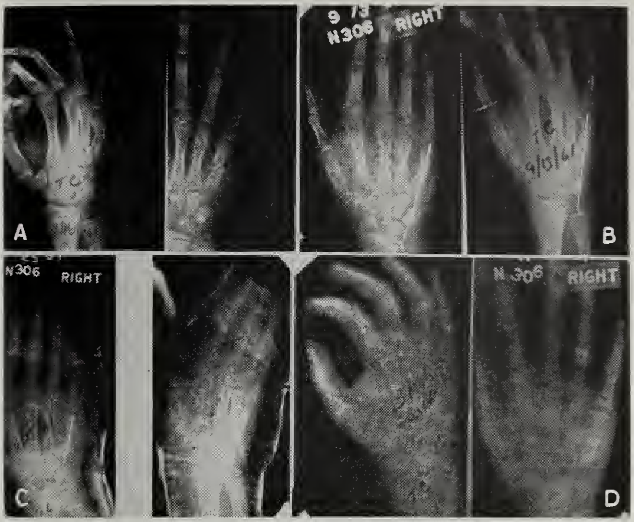

Fig. 3. Compound fracture of the fifth metacarpal with division of the extensor tendon of fifth finger. The wound was debrided, the fracture reduced and internally fixed with "5/64" guide wire sixe Steinman pin. The extensor was repaired. The finger was splinted in extension for four weeks. Hand function is normal and strength is normal at one year follow-up.

with the normal length of the tendons and is due to the mechanical disadvantage at which the tendons must function.

A metacarpal fracture that heals with a rotary deformity is more disabling than a metacarpal fracture that heals with excessive angulation. Rotary deformity, occurring in a metacarpal, is similar to rotary deformity occurring in a finger. A metacarpal which has healed with a rotary deformity results in a disability of the attached finger. Flexion of the finger results in an overlapping finger. This overlapping interferes with the normal function of the fingers and leads to considerable functional and cosmetic disability. Malunions of metacarpals, in which there is excessive angular or rotary deformity, or both, should be treated by osteotomy at the site of the deformity (fig. 5). The patient is often grateful for the improvement in hand function after successful treatment of the malunion. It is frequently desirable, at the time of surgery, to supplement the osteotomy site with a small amount of bone taken from the ilium. Internal fixation (fig. 5B) is usually indicated at the time of osteotomy.

Skeletal Traction

Skeletal traction is not desirable. It frequently causes permanent limitation of motion in the finger; slight angulation of the metacarpal is preferable to a stiff finger.

First Metacarpal Fractures

The first metacarpal, as has been pointed out earlier, is anatomically unique and differs from the other metacarpals. The first metacarpal is quite mobile, with flexion, extension, adduction, abduction and circumduction occurring in this joint. This joint was designed for motion and it is not as strong as the metacarpal carpal joints of the second through the fifth fingers, and fractures and dislocations are common through this joint. Fractures into the joint surface frequently cause the permanent disabling pain, usually due to traumatic arthritis. As nearly a perfect reduction as possible should be obtained. Frequently it is impossible to obtain a satisfactory reduction

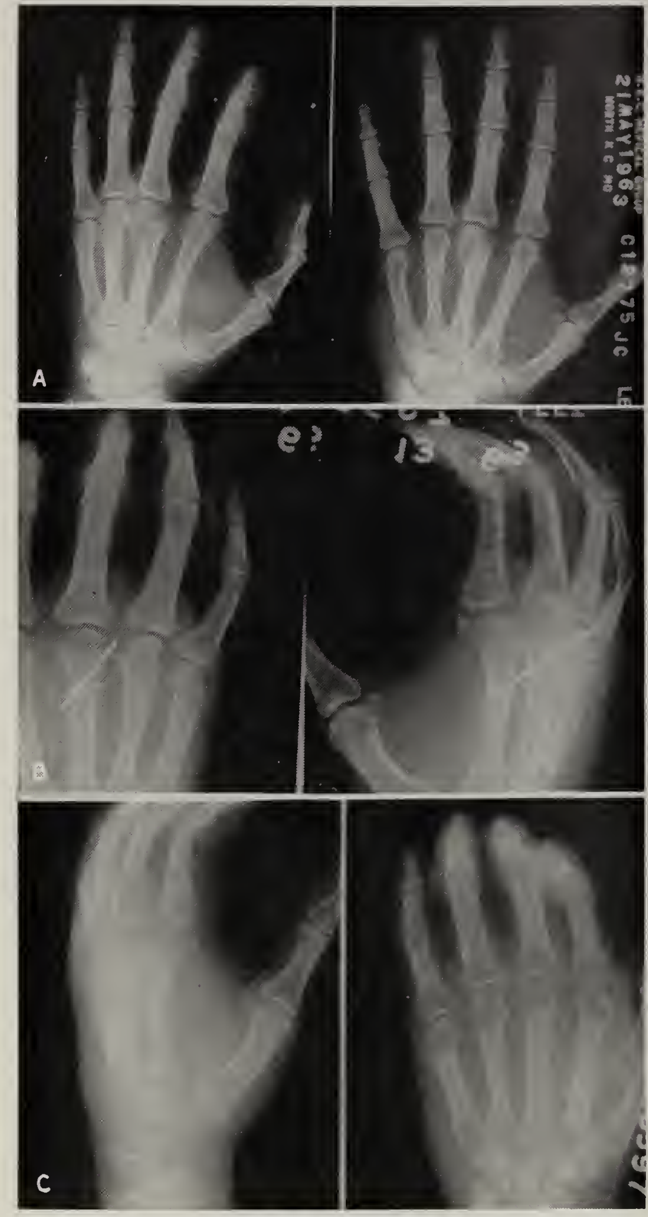

Fig. 4. A. Fracture of third metacarpal treated by open reduction and internal fixation with two "K" wires. B. Fracture of the proximal phalanx of index finger and third metacarpal treated by open reduction of third metacarpal and internal fixation with two "K" wires. C. Wires have been removed. Some limitation of finger motion—secondary to crushing injury of hand—remains.

by closed methods. If a satisfactory reduction of the fracture-dislocation of the metacarpal carpal joint of the thumb is not obtainable by closed methods, then open reduction is frequently indicated and desirable. This fracture can be reduced under direct vision and internally fixed with one or two small Kirschner wires with improvement of the joint surfaces. It is important to reduce not only the fracture, but the dislocation as well. Pain in the metacarpal carpal joint of the thumb due to malunion of a fracture in this area may be an indication for fusion of this joint. Fractures of the first metacarpals are discussed further by Bunnell in "Surgery of the Hand," and will not be discussed further here.

METACARPAL PHALANGEAL JOINTS

Dislocations occur at the metacarpal phalangeal joints, but are not common. Reduction is usually easily accomplished with only traction required. The metacarpal head may slip through the capsule and not be reducible by closed methods. The metacarpal phalangeal joint of

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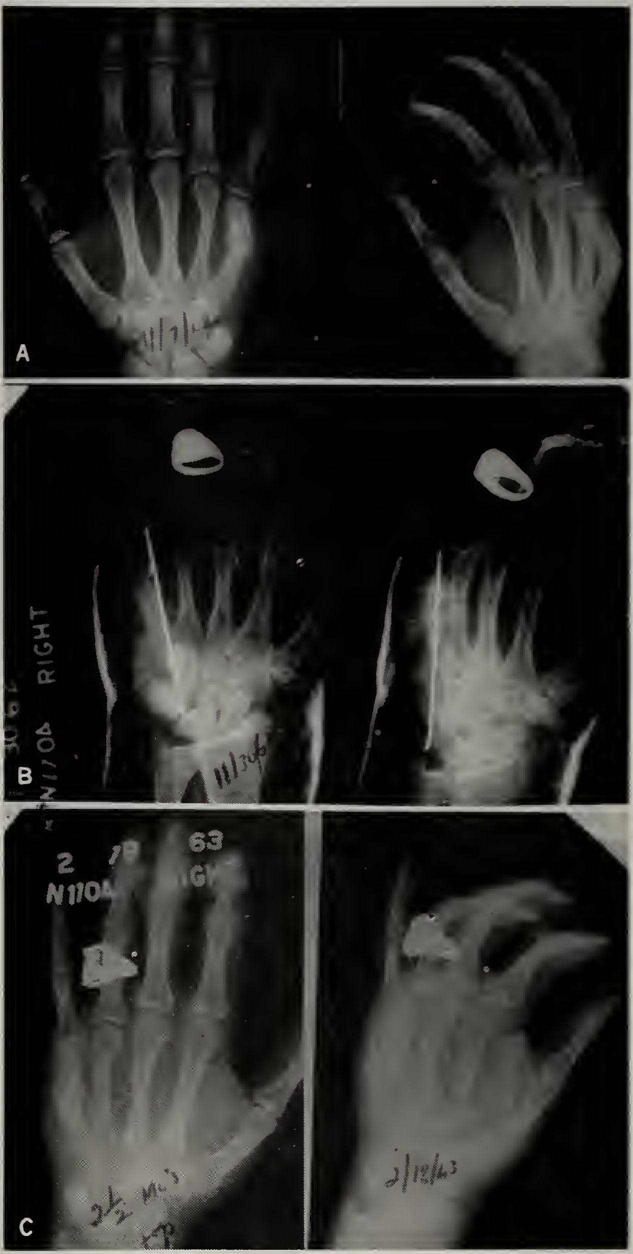

Fig. 5. A. Malunion of fracture of fifth metacarpal. Grip weak and painful, considerable cosmetic deformity of hand. B. Osteotomy of the fracture site. Supplementation with an autogenous iliac bone graft is frequently desirable but not done in this case. Note internal fixation after osteotomy. C. Two and one-half months postoperatively. Marked improvement in appearance and strength of hand.

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Research in the Service of Medicine

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PEPTIC ULCER • FUNCTIONAL HYPERMOTILITY • IRRITABLE COLON

H. E. PETERSEN, M.D., ***St. Joseph***

AMA Annual Session

Special Article

Missouri Delegates to the AMA, A. W. Neilson, M.D., Durward G. Hall, M.D. and H. E. Petersen, M.D., attended the meeting in San Francisco, June 22 to 25, 1964. Alternate delegate, J. Loren Washburn, M.D., served as delegate in place of Richard H. Kiene, M.D., who was unable to attend. Alternate delegates, Guy N. Magness, M.D., and Hugh E. Stephenson Jr., M.D., were also in attendance. Oscar P. Hampton, M.D., served as delegate for the Section on Military Medicine and Wendell G. Scott, M.D., served as alternate delegate for the Section on Radiology. Dr. Neilson served as a member of the Reference Committee on Rules and Order of Business. Dr. Hampton served on the Reference Committee on Medical Military Affairs.

Missouri Delegates Hall, Neilson, Petersen and Washburn, and Dr. O. P. Hampton of Military Medicine, and alternate delegate Magness seated in House session.

Missouri delegation holds caucus during AMA session.

Officers of the MSMA attending the session included Leonard T. Furlow, M.D., President; Paul R. Whitener, M.D., President-elect; David N. Kerr, M.D., Councilor of the Third District; Hector W. Benoit, M.D., Councilor of the Seventh District; Rolla B. Wray, M.D., Councilor of the Sixth District. Past Presidents Victor B. Buhler, M.D., and J. H. Summers, M.D., also attended.

Proceedings of the House of Delegates of the session of the American Medical Association, held in San Francisco, June 22 to 25, 1964, are reported. Missouri Delegates were Drs. Durward G. Hall, H. E. Petersen, Arthur W. Neilson and J. Loren Washburn.

Missouri received a signal honor in the election of Mrs. Richard A. Sutter of University City, as President-elect of the Woman's Auxiliary to the AMA.

Following the instructions of the MSMA House of Delegates at the 1964 session, the Missouri Delegates introduced and supported two resolutions relating (1) to the "make-up" of the AMA Council on Medical Education, and (2) the appointment of an ad hoc Committee to study the actions of the Council on Medical Education.

The resolution on changing the "make-up" of the Council was disapproved. The appointment of an ad hoc committee to study actions of the Council on Medical Education was disapproved, but the House requested that the present Committee to review organization of the AMA House of Delegates study the function and structure of the Council on Medical Education and make such recommendations as may be appropriate.

Tobacco and health, human rights, physician-hospital relations, continuing medical education, the cost of medical care and federal subsidization of prepayment plans and health insurance companies were among the major subjects acted upon by the House of Delegates at the American Medical Association's 113th annual convention.

Dr. Donovan F. Ward of Dubuque, Iowa, vice president of the Association, was named President-elect of the Association. He will become

President at the June, 1965, annual convention in New York City, succeeding Dr. Norman A. Welch of Boston, who was installed at the inaugural ceremony in San Francisco.

The AMA 1964 Distinguished Service Award was won by Dr. Irvine H. Page, director of research of the Cleveland Clinic, for his investigation of cardiac, vascular and renal disease.

Final registration figures reached a grand total of 49,437, including 14,229 physicians.

Tobacco and Health

The House approved a strong stand on tobacco and health by calling cigaret smoking "a serious health hazard." This action was taken after the reference committee on Public Health and Occupational Health considered 10 resolutions and a Board of Trustees report on the subject and heard considerable testimony.

In adopting a four-point reference committee report, the House said "the American Medical Association is on record and does recognize a significant relationship between cigaret smoking and the incidence of lung cancer and certain other diseases."

It urged that programs be developed to disseminate vital health education material on the hazards of smoking to all age groups through all means of communication. The House also recognized the contribution of the Surgeon General's Committee in its comprehensive report. And it emphasized that a joint committee of the AMA and the National Education Association already has adopted a resolution urging elementary and secondary schools to include programs on smoking and health in their health education curricula.

The House further recommended that the AMA pamphlet, "Smoking: Facts You Should Know," should be modified "in the light of accumulating knowledge."

Finally, the House said that the delegates and the Board of Trustees "should take great pride in the establishment of the research program on tobacco and health that is being carried out by the AMA Education and Research Foundation."

In adopting the report of the AMA-ERF the House called attention to the following statement:

"The Board of Directors of AMA-ERF and the Board of Trustees of the AMA were clearly aware of the possibility of criticism in accepting this grant (10 million dollars from several tobacco companies). But against that possibility they weighed the potential benefits to the public who will continue to smoke and concluded that the risk was insignificant by comparison. The only hope of minimizing the hazards of smoking lies in research which points to the course that the AMA as well as others must take."

Human Rights

On the major issue of human rights the House declared itself "unalterably opposed to the denial of membership, privileges and responsibilities in county medical societies and state medical associations to any duly licensed physician because of race, color, religion, ethnic affiliation or national origin."

This action was taken after the reference committee had heard a detailed discussion and had considered four resolutions on the subject.

In addition, the House called "upon all state medical associations, all component societies, and all individual members of the AMA to exert every effort to end every instance in which such equal rights, privileges and responsibilities are denied."

The House also accepted a report from the Board on the liaison committees of the AMA and the National Medical Association. This report reviewed the history of the committees and noted that "great progress has been made voluntarily. More progress can reasonably be expected in the immediate future, especially if the committees are permitted to continue on a constructive, cooperative basis. This requires effort, but more importantly, good will and the desire to eliminate problems."

Physician-Hospital Relations

Conclusions and recommendations in a significant and extensive report on physician-hospital relations were adopted by the House. Prepared by the Council on Medical Service's Committee on Medical Facilities, the report stresses "the imperative need for the medical profession to assume responsibility for the quality, continuity and availability of professional services and for the coordination of these services with the other essential supportive aspects of health care."

The report's recommendations are designed to serve as guidelines for physicians in meeting the problems involved in the changing patterns of care such as: appointment of salaried chiefs of staff; appointment of salaried heads of clinical departments; appointment of salaried directors of medical education; employment of salaried physicians for outpatient and emergency departments; use of salaried physicians to provide care ordinarily provided by interns and residents, and utilization of closed-panel prepayment medical care programs by hospitals.

The report also includes a review of the development of AMA's policy on physician-hospital relations, a study of the relation of policy to actual practice, and an investigation of the factors influencing change—including graduate education, medical finance, expansion of hospital functions and regulation of medical care.

Continuing Medical Education

Authorization was made by the House to establish an AMA-sponsored survey and accreditation program in continuing medical education. In the program attention will be concentrated on institutions and organizations offering courses rather than on individual courses, and appraisal of an institution's or organization's program will be carried out only at its request.

Eventually, approved institutions or organizations will be so designated in the Council's annual lists of "Continuing Education Courses for Physicians," and when all institutions which wish to list their courses have had the opportunity to be considered for approval, only courses of approved institutions and organizations will be included in the annual list. Programs will be surveyed by a Review Committee on Continuing Medical Education.

Cost of Medical Care

A four-volume report of the AMA Commission on the Cost of Medical Care was received by the delegates, and the House concurred with the Board of Trustees that the conclusions and recommendations of the Commission will be studied and a report will be made to the House for its consideration at the 1964 Clinical Convention.

The four volumes include a General Report on factors involved in medical care costs, a full report on "Professional Review Mechanisms," another on "Significant Medical Advances" and one on "Changing Patterns of Hospital Care."

In its report the Board said that the Commission "is aware that its efforts will not result in a magic reduction in the price of medical and hospital services. It does believe, however, that its study has produced a considerable amount of new and relevant information which will serve as a basis for better understanding by the public and the medical profession of this complex subject."

Reaffirmed the AMA policy favoring federal grants for "bricks and mortar"—funds for construction and renovation of medical schools, hospitals, related institutions and mental health centers—but urged that the "advantages and desirability of multiple source financing be kept clearly in mind." The House also was informed by the Board that it is appointing a commission to conduct a broad study of the role of federal support of medical research.

Other Actions

The House went on record as opposing federal subsidization of prepayment plans and health insurance companies, and it asked for an AMA study of the development of state programs which utilize prepayment plans or health insurance companies in the implementation of state programs of medical aid to the ageing under the Kerr-Mills law.

A proposal to poll all AMA members concerning compulsory Social Security for self-employed physicians was rejected by the House. In addition, the House concurred with the reference committee in opposing polls of the membership on issues of "great or even moderate importance" because the House members express the majority sentiments of their constituents on all questions coming before the House.

An expanded program on medical ethics was endorsed by the House. The program will be designed to educate physicians and the public on what medical ethics means to them and how medical ethics affects them. The Judicial Council, working with the Board of Trustees, will determine the means by which this expanded program is to be implemented.

Approval was given to a change in the Bylaws to allow the House to set the hour and day of election of AMA officers at the Annual Convention. This was adopted early in the House session and made it possible to have the nominations on Wednesday afternoon and the elections on Thursday morning.

A three-point communications program designed to improve the public relations position of the medical profession was endorsed by the House on recommendation of the AMA Committee on Communications. The program includes a redoubling of efforts by county and state societies, closer liaison with media personnel and prompt information to state societies on AMA news releases and testimony.

Miscellaneous Actions

In considering a wide variety of resolutions and reports, the House also:

Approved the creation of the Section on Allergy on recommendation of the Board of Trustees.

Approved a comprehensive inquiry of the causative factors for the sharp increase in syphilis and gonorrhea and urged the AMA to "take leadership in educational and research measures designed to control and eliminate syphilis."

Okayed a national conference on areawide planning of hospitals and related health facilities, to be sponsored under the auspices of the AMA.

Agreed to continue and broaden studies on the problems of unwed mothers, illegitimacy and other related matters and to develop positive preventive programs.

Supported a positive statement on protecting children against physical abuse and called for legislative guidelines to the states relative to legislation on this matter.

Asked the Board of Trustees to investigate establishment of a wire communications system between AMA headquarters in Chicago and offices of state medical associations.

Referred to the Council on Medical Service a resolution condemning the practice by some hospitals of adopting constitutions which deny staff privileges to physicians not eligible or certified by specialty bodies or societies.

Agreed with the Board that a forum for representatives of national medical specialty societies and the American Academy of General Practice be held on Nov. 1, 1964, in Chicago.

Approved a resolution calling for the publication of the proposed nominees for standing committees (councils) of the House be submitted in advance of the Annual Convention, preferably in the House of Delegates Handbook.

Recommended that the Board of Trustees use the talents of Dr. Edward R. Annis, immediate past president, and other qualified spokesmen for medicine with appropriate remuneration.

Asked the Committee on Insurance and Prepayment Plans of the Council on Medical Service to consider a revision of simplified health insurance claims forms.

Recommended that the Board of Trustees approve the establishment of an ad hoc study on family practice as proposed by the Council on Medical Education.

Agreed with the change of name of the Council on Medical Education and Hospitals to the Council on Medical Education.

Requested clarification of the ethical and legal limitations of physicians participating in court-ordered, pre-trial psychiatric examinations.

Urged the AMA to continue its vigorous opposition to tax regulations discriminating against "professional associations" and "professional corporations," and its support of legislation which seeks to provide tax equality with business corporations for "professional associations" and "professional corporations."

OPENING SESSION

Dr. Edward R. Annis of Miami, outgoing AMA President, told the special Sunday afternoon opening session that a greater effort is needed in the areas of continuing medical education and health education programs. He also urged state and county medical associations to bolster their paid executive personnel to help carry out local, state and national projects. Doctor Annis called for an increase in AMA dues and later the House referred the question of a dues increase to the Board of Trustees for study and for a report at the 1964 Clinical Meeting in Miami. Honored at the opening session were the presidents of state and territorial medical associations and a number of special AMA guests from national organizations.

At the Monday session awards announced were the AMA Scientific Achievement Award to Prof. Rene Jules Dubos, Ph.D., of the Rockefeller Institute, New York City, and the Joseph Goldberger Award in Clinical Nutrition to Dr. William J. Darby of Vanderbilt University School of Medicine, Nashville.

INAUGURAL CEREMONY

Doctor Welch, in his inaugural address Tuesday night, said that medicine must be united if it is "to serve the public in the future to the high degree that it has in the past." He stressed that American physicians must be "standing strong and firm with a heart and a conscience tuned to public need, with a respect for the rights and privileges of the individual, and with an abiding faith in our free competitive system of medical practices."

In keeping with Doctor Welch's address, "Unity in Medicine," presidents or their representatives from 29 medical specialty organizations were honored guests at the ceremony.

The Distinguished Service Award was presented to Doctor Page and the Scientific Achievement Award was given to Doctor Darby.

WEDNESDAY SESSION

Speaking at the Wednesday session, Doctor Welch pointed up the growing alliance between medicine and research—an alliance rooted in truth, knowledge and the freedom to search them out. He called these "the greatest assets available for human development and human well-being." Doctor Welch also enumerated the important projects of the AMA in the past year such as mental health, continuing medical education, tobacco and health, and AMA-ERF, the Institute of Biomedical Research.

Election of Officers

In addition to Doctor Ward, the new President-elect, the following officers were named:

Dr. Carlton Wertz of Buffalo, vice president; Dr. Milford O. Rouse of Dallas, Speaker of the House, and Dr. Walter C. Bornemeier of Chicago, vice speaker.

Dr. Robert C. Long of Louisville was reelected to the Board of Trustees for a three-year term, and Dr. Alvin J. Ingram of Memphis was elected to a three-year term. Doctor Ingram replaces Dr. R. B. Robins of Camden, Ark.

Nominated and elected to the Judicial Council was Dr. Charles C. Smeltzer of Knoxville, Tenn.

Named to the Council on Medical Education were Dr. William P. Longmire of Los Angeles, and Dr. William A. Sodeman of Philadelphia.

Elected to the Council on Medical Service was Dr. John Rumsey of San Diego, and reelected was Dr. Willard A. Wright of Williston, N. D.

Dr. William A. Hyland of Grand Rapids, Mich. was reelected to the Council on Constitution and Bylaws.

PULMONARY NEOPLASM

(Continued from page 677)

ential diagnosis of obstructive pulmonary disease.

As case illustration of this occurrence in a 64 year old patient has been presented.

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DUODENAL ULCER

(Continued from page 686)

When stomachs are examined four to five days after the freeze most stomachs appear to be normal. However, he has observed small areas of necrosis 1 to 3 cm. in diameter, and has had one gastroscopic perforation. Dr. Colcher stated "I am somewhat frightened of the changes I see at times. I would like to see the current fashion for using the procedure end."

Summary

We have had experience with six patients who had undergone seven gastric freezing procedures in the prescribed manner. Careful follow-up revealed that the incidence of complications, primarily gastric ulceration, has been high. We have discontinued gastric freezing and await the results of a properly performed double-blind controlled study proving the value and safety of the procedure.

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METACARPAL FRACTURES

(Continued from page 690)

the index finger seems to require open reduction more commonly than the other fingers. When open reduction is indicated, because of failure of closed reduction, this should be accomplished promptly. Excessive delay in reduction usually results in limitation of motion in this joint.

Summary

Fractures of metacarpals are common and the cause of much disability. The treatment of metacarpal fractures by manipulation and skin traction is recommended and discussed. The indications and technic of open reduction are discussed.

Bunnell, Surgery of Hand, 3rd Edition.

Outwardly calm...but what goes on inside?

Appearances on the outside do not necessarily suggest what goes on inside. This is particularly true of the ulcer patient, who may appear jolly and unruffled to his neighbors, but presents to you the classic symptoms: organic and functional disorders of the G.I. tract, associated with anxiety and tension.

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Leonard T. Furlow, M.D.

President's Message

There has been a change in plans!

Due to a conflict in dates at our convention hotel in Kansas City, the 1965 MSMA Annual Session will be held in St. Louis, rather than in Kansas City.

The conflict arose after advance arrangements had been made, and we were most fortunate that the Chase-Park Plaza Hotel in St. Louis was available for the same dates as had been originally scheduled, Sunday, April 4, through Wednesday, April 7.

After 1965, we will begin again to alternate the site of our annual meetings between the two cities. Thus, the 1966 session will be in Kansas City, the 1967 meeting in St. Louis, and so on.

There is, I believe, an advantage in this new arrangement, with the Annual Session now being in St. Louis in the even years and Kansas City in the odd-numbered years.

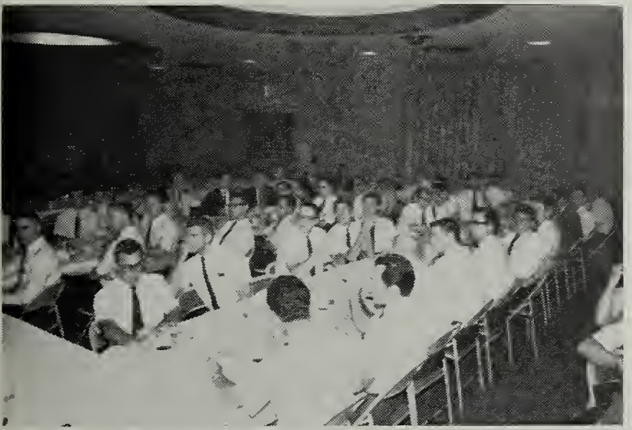
Following tradition, Association presidents elected from St. Louis have been presiding at meetings which fall in an even year. Likewise, presidents elected from Kansas City have presided in an odd-numbered year. Therefore, the presidents from each of these cities have been presiding at what were, for them, out-of-town meetings. The new cycle means that presidents from St. Louis and Kansas City will now be presiding at meetings in their home towns, with many more of their personal friends and colleagues able to be in attendance.

Please remember this change in plans! I hope that you will mark down today the dates and the new place of the 1965 Annual Session—April 4-7, Chase-Park Plaza Hotel, St. Louis.

Leonard T. Furlow

Ramblings of the Field Secretary

On May 20 the Rural Medical Service Committee of the MSMA and the Public and Professional Relations Committee of the MAGP jointly sponsored a luncheon meeting for the junior medical students at the University of Missouri Medical School which was held in the Student Union Building at the University. This has become an annual affair with an attempt on the part of the two committees to bring helpful information to these medical students regarding the private practice of medicine and particularly in the field of general practice. In addition, information was presented to inform them of the purposes and programs of organized medicine through the local county medical society, the State Medical Association, the AMA, and the Academy of General Practice. Dr. Leonard T. Furlow of St. Louis, President of the MSMA, spoke to the students concerning the county medical societies, the State Association and the AMA. He set forth the need for their active support of organized medicine and the many values which would accrue to them because of such support.



Junior medical students show interest in program.

Dr. Bass, chairman MSMA Rural Health Committee, speaks on solo practice.

Dr. Edson C. Carrier of Kansas City, President of the MAGP, discussed the Academy, its objectives, program and values of membership. To give these neophyte physicians a bit of what they might expect in private practice, three physicians from rural Missouri spoke on their particular type of practice. Dr. B. J. Bass, Salem, discussed solo practice; Dr. Charles Worley, Sweet Springs, talked on partnership practice and Dr. A. E. Spelman of Smithville, discussed group practice. Following their formal presentations questions from the audience were received and answered by those on the speakers panel.

Dr. Carrier, requested by Chairman Campbell, to answer a pertinent question.

The luncheon session was presided over by Dr. Edward Campbell, Cape Girardeau, Chairman of the Public and Professional Relations Committee of the MAGP. Dr. William Mayer, Assistant Dean of the University of Missouri Medical School opened the meeting with a short explanation to the students and others present of the purpose of the session and expressed the appreciation of the medical school for the efforts of the State Medical Association and the Missouri Academy in promoting these annual luncheon affairs. More than 65 people including junior medical students and guests were present.

On May 21 and 22 Dr. Edward R. Annis, Miami, Fla., President of the AMA, spent two full days of activity in Springfield, Mo., under the direction and sponsorship of the Greene

Eight hundred people attended banquet to hear Dr. Annis speak.

County Medical Society. On Thursday evening, May 21, Dr. Annis spoke before some 800 people in the basement of the Shrine Mosque and unveiled the marvelous story of medicine. He pointed out the tremendous advances which have occurred in medicine over a relatively few years and warned those present of what can happen if politics gets further into the medical picture. The two days Dr. Annis spent in Springfield were busy ones. He spoke to numerous school assemblies, civic groups and held press and television conferences. His talk at the dinner meeting in the Shrine Mosque was covered fully by the press, radio and television of the Springfield area. Prior to his dinner speech, Dr. Annis received a key to the city of Springfield from Mayor E. L. Anderson, and the President of the Chamber of Commerce, Mr. Pearson Ward, made him an honorary "Ozark Hillbilly." In addition to these honors, he was given signal recognition by the Greene County Troubadours who made him an "Honorary Greene County Boy" with the added presentation of a green jacket. This honor and the jacket were presented by Dr. Jim Brown, leader of the Greene County Medical Society's entertaining troubadours. Dr. Annis in a fine tribute to Dr. Brown and his medical musicians presented a check as his special donation to the medical student loan fund of the Greene County Medical Society which the troubadours and their musical records are supporting. The Greene County Medical Society deserves much credit for this outstanding project of so successfully organizing and administering a full two day Dr. Annis appearance in Springfield. Those who have heard Dr. Annis speak realize the value of his appearances in our home state.

Dr. Annis is made an "Honorary Greene County Boy" and presented Green Jacket by Dr. Jim Brown.

Dr. Annis receives standing ovation at close of his talk.

In systole and diastole, the human heart produces a maximum signal of only a few millivolts between two ECG limb electrodes. Mixed in with this tiny signal may be some unwanted electrical "noise", caused by power lines, nearby X-ray or diathermy machines, or even ordinary office equipment. Until now, eliminating this noise from the record usually meant time-consuming adjustments and rerunning records until the complexes were clear.

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News—Personal and Professional

The American Board of Pathology recently announced that the following Missouri physicians were certified as Diplomates in Pathology: **James S. Nelson**, M.D., Brentwood; **Guido I. Podrecca**, M.D., Springfield; **Vincent G. Palermo**, St. Louis, and **David L. Zacharias**, M.D., Kansas City.

At a dinner meeting of the St. Louis University Alumni recently held in Cape Girardeau, **Edward D. Campbell**, M.D., Cape Girardeau, was presented with a citation of appreciation from the University for his work in the University's Priority Needs Campaign.

A Papal Order of Merit was recently awarded to **Harry K. Purcell**, M.D., St. Louis. Dr. Purcell, who spent four years at the Holy Family Hospital in New Delhi, India, received a gold medal and the Order of Pro Ecclesia et Pontifice from the Archbishop of Delhi.

Officers of the Greater Kansas City Academy of General Practice, who were installed at the recent annual meeting, included **John M. Haight**, M.D., Raytown, President; **Walter J. Stelmach**, M.D., Kansas City, President-elect; **Reinhardt D. Dwyer**, M.D., North Kansas City, Secretary, and **George P. Williams**, M.D., Kansas City, Treasurer.

Missouri physicians recently certified by the American Board of Obstetrics and Gynecology included, **Richard M. Baldwin**, M.D., Springfield; **Russell Hanlon Jr.**, M.D., Columbia; **Thomas H. McGuire**, M.D., Kansas City; **John Barlow Martin**, M.D., St. Louis; **Paul J. Ritter**, M.D., St. Louis, and **Kenneth E. Waddell**, M.D., Springfield.

DePauw University, Greencastle, Ind., presented a citation recently to **Crofford O. Vermillion**, M.D., St. Louis, "in recognition of outstanding achievements and services which reflect honor upon DePauw."

The Chairman of the Board of Directors of Washington University, St. Louis, recently announced that **Eugene M. Bricker**, M.D., St. Louis, was elected as a member of the board of trustees.

Drury College, Springfield, recently elected **Frank McDowell**, M.D., St. Louis, as chairman of the Board of Trustees.

The Missouri Society of Internal Medicine installed **Blaine Z. Hibbard**, M.D., Kansas City, as president at the recent annual meeting, held at the Lake of the Ozarks.

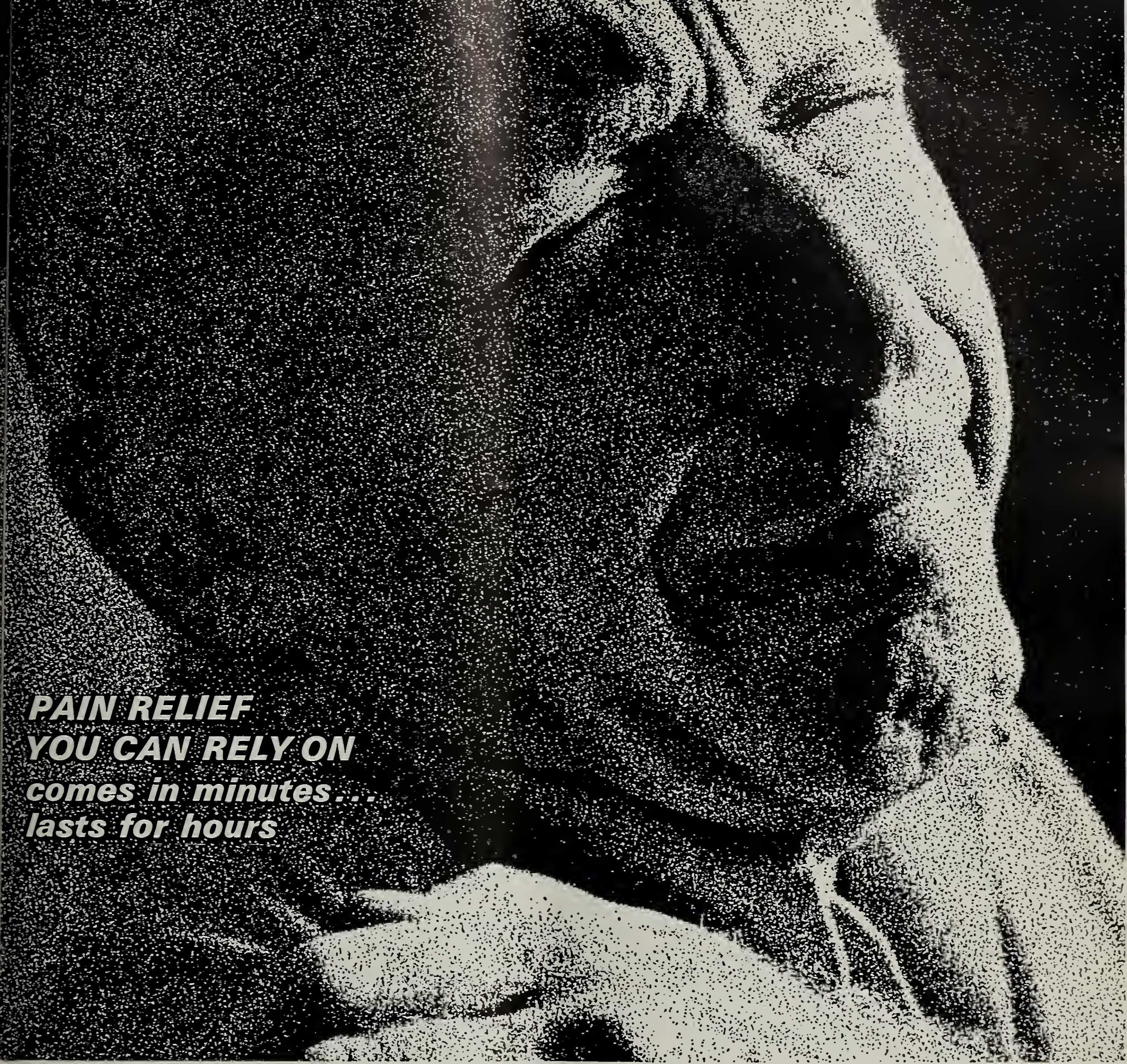
A feature story on the life of **Charles L. Lawless**, M.D., Marshall, was carried in the *Marshall Democrat* on the occasion of his 88th birthday.

At a recent meeting of the staff, **Wayne Boydston**, M.D., Odessa, was elected chief of staff at Lexington Memorial Hospital.

The annual meeting of the Missouri Heart Association was held in Columbia recently. **James A. Kinder**, M.D., Cape Girardeau, was installed as President.

At the Missouri Public Health Association annual meeting in Jefferson City, **David Goldring**, M.D., St. Louis, was presented the W. Scott Johnson Award for outstanding work in the field of Public Health in Missouri. Dr. Goldring has conducted the Rheumatic Fever Clinic at the Jefferson County Health Department for the past 15 years.

Physicians who have completed 35 years as members of the Missouri Baptist Hospital medical staff were presented with certificates of appreciation by Joyce S. Pillsbury, president of the hospital's board of managers. They are Drs. **Edwin F. Vitt, James R. Nakada, Hanford Phillips, Charles E. Eimer, Clarence H. Kilker, Elmer A. Lansche, William R. Bohne, Andy Hall Jr., James A. Forsen, Sam B. Grant** and **Fred W. Teiber**. The ceremony took place in the lobby of the hospital as part of Hospital Week observance.



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New Members

William H. Anderson, M.D., State Hospital No. 1, Fulton, has become a member of Callaway County Medical Society. Dr. Anderson is a native of Ewen, Mich., received his preliminary education at Albion College, and his M.D. degree at the University of Michigan in 1940. He specializes in psychiatry.

Donald L. Baker, M.D., 5455 Tinker Ave., Richards-Gebaur AFB, has become a member of Lafayette-Ray County Medical Society. Dr. Baker is a native of Americus, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1960. He specializes in general practice.

Ross D. Blades, M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Blades is a native of Bernie, Mo., received his preliminary education at Washington University, and his M.D. degree at St. Louis University in 1959.

Benjamin Borowsky, M.D., 100 N. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Borowsky is a native of Tulsa, Okla., received his preliminary education at the University of Illinois, and his M.D. degree at Washington University in 1958. He specializes in internal medicine.

Mason D. Cloyd, M.D., 2715 Union Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Cloyd is a native of St. Louis, received his preliminary education at Xavier University, and his M.D. degree at Howard University in 1944. He specializes in general practice.

Billy G. Crayton, M.D., P. O. Box 41, Waverly, has become a member of Lafayette-Ray County Medical Society. Dr. Crayton is a native of Holden, Mo., received his preliminary education at Stetson University, and his M.D. degree at the University of Missouri in 1962. He specializes in general practice.

James V. Deininger, M.D., 1630 N. Jefferson St., Springfield, has become a member of Greene County Medical Society. Dr. Deininger is a native of Lexington, Neb., received his preliminary education at the University of California, and his M.D. degree at the University of California in 1940. He specializes in ear, nose and throat.

Burl M. Dillard, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Dillard is a native of Noodle, Tex., received his preliminary education at Hardin Simmons University, and his M.D. degree at the University of Texas in 1958. He specializes in surgery.

George D. Flanigan Jr., M.D., 2601 W. Whittier St., St. Louis, has become a member of St. Louis Medical Society. Dr. Flanigan is a native of Bonham, Tex., received his preliminary education at Charlotte College, and his M.D. degree at Howard University in 1960. He specializes in obstetrics and gynecology.

Marie M. Frain, M.D., State Hospital No. 4, Farmington, has become a member of Mineral Area County Medical Society. Dr. Frain is a native of Decatur, Ga., received her preliminary education at the University of Maryland, and her M.D. degree at the University of Georgia in 1930. She specializes in psychiatry.

Arthur H. Gale, M.D., 2428 Woodson Road, Overland, has become a member of St. Louis County Medical Society. Dr. Gale is a native of St. Louis, Mo., received his preliminary education at Washington University, and his M.D. degree at the University of Missouri in 1959. He specializes in internal medicine.

Richard C. Hedges, M.D., 402 St. Louis Blvd., Excelsior Springs, has become a member of Clay County Medical Society. Dr. Hedges is a native of Excelsior Springs, Mo., received his preliminary education at the University of Pennsylvania, and his M.D. degree at Jefferson Medical College in 1958. He specializes in general surgery.

Philip C. Higgins, M.D., 11950 Kendon Drive, St. Louis, has become a member of St. Louis Medical Society. Dr. Higgins is a native of St. Louis, received his preliminary education at Notre Dame University, and his M.D. degree at St. Louis University in 1958. He specializes in obstetrics and gynecology.

R. Eugene Holemon, M.D., 4940 Audubon St., St. Louis, has become a member of St. Louis Medical Society. Dr. Holemon is a native of Centralia, Ill., received his preliminary education at Washington University, and his M.D. degree at Washington University in 1958. He specializes in psychiatry.

Bernard L. Hoover, M.D., 3915 Watson Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Hoover is a native of Junction City, Kan., received his preliminary education at Kansas State University, and his M.D. degree at St. Louis University in 1958. He specializes in internal medicine.

Thomas R. Hunt, M.D., 6400 Prospect Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Hunt is a native of Columbia, Mo., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1958. He specializes in neurosurgery.

Tsutomu Kamada, M.D., 117 Clay St., St. Charles, has become a member of Lincoln-St. Charles County Medical Society. Dr. Kamada is a native of Phoenix, Ariz., received his preliminary education in Tokyo, Japan, and his M.D. degree at Keid University in 1950. He specializes in surgery.

Saul J. Klein, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Klein is a native of Utica, N. Y., received his preliminary education at Syracuse University, and his M.D. degree to State University of New York in 1959. He specializes in urology.

Richard M. Krause, M.D., 660 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Krause is a native of Marietta, Ohio, received his preliminary education at Marietta College and his M.D. degree at Western Reserve University in 1952. He specializes in medical research.

Richard E. Lauritzen, M.D., 216 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Lauritzen is a native of Fresno, Calif., received his preliminary education at Fresno State College, and his M.D. degree at Washington University in 1957.

David A. Leitch, M.D., 24th & Cherry Sts., Kansas City, has become a member of Jackson County Medical Society. Dr. Leitch is a native of Parkerville, Kan., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1963. He specializes in general practice.

Charles M. Linsenmeyer, M.D., 1515 Lafayette St., St. Louis, has become a member of St. Louis Medical Society. Dr. Linsenmeyer is a native of Detroit, Mich., received his preliminary education at the University of Notre Dame, and his M.D. degree at the University of Michigan in 1959. He specializes in orthopedic surgery.

Daniel J. Martin, M.D., 4660 Maryland Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Martin is a native of St. Louis, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1959. He specializes in obstetrics and gynecology.

Bernard J. Melia Jr., M.D., Medical Arts Bldg., Jefferson City, has become a member of Cole County Medical Society. Dr. Melia is a native of Kansas City, Mo., received his preliminary education at the University of Kansas City and his M.D. degree at the University of Missouri in 1960. He specializes in dermatology.

Nirmal K. Mitra, M.D., 5300 Rosewood St., Mission, Kan., has become a member of Jackson County Medical Society. Dr. Mitra is a native of Hazaribagh, India, received his preliminary education at Patna University, and his M.D. degree at Prince of Wales Medical School in 1953. He specializes in pediatrics.

Allan Mount, M.D., 9820 Cambridge St., Kansas City, has become a member of Jackson County Medical Society. Dr. Mount is a native of Jonesboro, Ark., received his preliminary education at the University of Arkansas, and his M.D. degree at the University of Tennessee in 1959. He specializes in pathology.

Daniel F. O'Sullivan, M.D., 1402 S. Grand Blvd., St. Louis, has became a member of St. Louis Medical Society. Dr. O'Sullivan is a native of St. Louis, received his preliminary education at Holy Cross College, and his M.D. degree at St. Louis University in 1959. He specializes in surgery.

John J. Phillips, M.D., 615 S. New Ballas Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Phillips is a native of Granite City, Ill., received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1962. He specializes in surgery.

Richard L. Phillis, M.D., 2127 Alfred Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Phillis is a native of Cambridge, Ill., received his preliminary education at St. Ambrose College, and his M.D. degree at the University of Illinois in 1960. He specializes in internal medicine.

Charles M. Poser, M.D., 39th & Rainbow Sts., Kansas City, has become a member of Jackson County Medical Society. Dr. Poser is a native of Antwerp, Belgium, received his preliminary education at Antwerp, Belgium College, and his M.D. degree at Columbia University in 1951. He specializes in neurosurgery.

Harry E. Raybuck, M.D., 457 N. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Raybuck is a native of Hayti, Mo., received his preliminary education at Westminster College, and his M.D. degree at the Medical College of Georgia in 1959. He specializes in obstetrics and gynecology.

Lillian Recant, M.D., 660 S. Euclid Ave., St.

Louis, has become a member of St. Louis Medical Society. Dr. Recant is a native of New York, N. Y., received her preliminary education at Hunter College, and her M.D. degree at Columbia University in 1946. She specializes in internal medicine.

Albert F. Schoeck, M.D., 615 S. New Ballas Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Schoeck is a native of Cleveland, Ohio, received his preliminary education at John Carroll University, and his M.D. degree at St. Louis University in 1952. He specializes in anesthesiology.

Irvin Siegel, M.D., 215 Volker Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Siegel is a native of Poland, received his preliminary education at Crane Junior College, and his M.D. degree at the University of Illinois in 1930. He specializes in medical education.

David Sperling, M.D., 8525 Douglas Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Sperling is a native of Birmingham, Ala., received his preliminary education at the University of Alabama, and his M.D. degree at Washington University in 1959. He specializes in surgery.

Martin F. Stein, M.D., 114 N. Taylor Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Stein is a native of Cleveland, Ohio, received his preliminary education at John Carroll University, and his M.D. degree at St. Louis University in 1959. He specializes in internal medicine.

Raymond F. Stone, M.D., 7949 State Line, Kansas City, has become a member of Jackson County Medical Society. Dr. Stone is a native of Columbia, Mo., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1958. He specializes in general practice.

Winfred L. Sugg, M.D., 2001 Westfield Court, St. Louis, has become a member of St. Louis Medical Society. Dr. Sugg is a native of Greene County, N. C., received his preliminary education at the University of North Carolina, and his M.D. degree at the University of North Carolina in 1957. He specializes in surgery.

Jay F. Tuttle, M.D., State Hospital No. 1, Fulton, has become a member of Callaway County Medical Society. Dr. Tuttle is a native of Seattle, Washington, received his preliminary education at Walla Walla College, and his M.D. degree at the College of Medical Evangelists in 1939. He specializes in psychiatry.

Willy J. Weinstein, M.D., 640 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Weinstein is a native of New York, N. Y., received his preliminary education at Columbia University, and his M.D. degree at Washington University in 1956. He specializes in neurology.

James W. White, M.D., 2812 Highland St., Kansas City, has become a member of Jackson County Medical Society. Dr. White is a native of Suffolk, Va., received his preliminary education at Hampton Institute, and his M.D. degree at Meharry Medical College in 1959. He specializes in urology.

Charles K. Whittaker, M.D., 627 E. 69th St., Kansas City, has become a member of Jackson County Medical Society. Dr. Whittaker is a native of Kansas City, Mo., received his preliminary education at Princeton University, and his M.D. degree at Northwestern University in 1956. He specializes in neurosurgery.

Dolores J. Wolff, M.D., 5363 B. Stewart, Richards-Gebaur AFB, Kansas City, has become a member of Jackson County Medical Society. Dr. Wolff is a native of St. Louis, received her preliminary education at Washington University, and her M.D. degree at Washington University in 1959. She specializes in anesthesiology.

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The Council

The Council met at the Park Plaza Hotel, St. Louis, May 15, 16, 1964, with Byron M. Stuart, M.D., Boonville, Chairman, presiding. Those present were Drs. Stuart; Joseph L. Fisher, St. Joseph; David N. Kerr, St. Louis; Rolla B. Wray, Nevada; Hector W. Benoit, Kansas City; Doyle C. McCraw, Bolivar; E. A. Stricker, St. James; W. D. English, Cardwell; Leonard T. Furlow, St. Louis; Paul R. Whitener, St. Louis; John I. Matthews, Jefferson City; Charles R. Doyle, St. Louis; Vernon E. Wilson, Columbia; H. M. Hardwicke, Jefferson City; Walter S. Wiggins, Chicago; Stanley S. Peterson, Springfield; Gerald L. Miller, Kansas City; Charles B. Wheeler, Kansas City; A. W. Neilson, St. Louis; Angelo Lapi, Kansas City; Messrs. John W. Noble, Kennett; Gary Schnedler, Springfield; Hollister Smith, St. Louis; Edgar Mothershead, St. Louis; Frank Woolley, Chicago; Jordan Singleton, St. Louis; Alan Smith, Kansas City; Thomas P. Fox, Ray McIntyre, T. R. O'Brien, St. Louis; Misses Peggy Heilig, Helen Penn, St. Louis.

COUNCIL ON MEDICAL EDUCATION

Dr. Wiggins, Secretary of the AMA Council on Medical Education, discussed the work of the Council and resolutions that have been introduced in the AMA House of Delegates. He said in part: In June 1962, as a substitute for Resolution No. 6 (introduced by the Missouri Delegation) the Reference Committee on Medical Education and Hospitals proposed the following: Resolved: (1) That at least six members of the Council shall be engaged in the private practice of medicine in hospitals that do not have a medical school affiliation; (2) That no more than four members may be salaried personnel of a medical school or university; (3) That in the selection of all individuals as nominees for election to Council membership, deliberate care shall be exercised to assure that those selected understand and are sympathetic to the medical care needs of the public.

In presenting the substitute resolution under study, the Reference Committee stated . . . "it believes it important that members of the Council understand the needs of the private practice of medicine and the community hospitals in which it functions. In particular the Council should appreciate the proper role of the non-university hospital for intern and resident training." The Council believes it is evident from this statement of the Reference Committee and from the discussion in the hearing of the proponents of the original resolution that the proposal originated from dissatisfaction with the number of house officers, especially interns, who accept positions in non-university affiliated community hospitals.

The Council does not place interns and influences their placement only by limiting the possibilities for the student's selection to hospitals with programs approved by the Council. It endorses all approved programs as being of good educational value and makes no attempt to differentiate among them.

In 1951, five out of 10 Council members were primarily full-time medical educators and the other five were primarily full-time in the private practice of medicine. Only one member was without a medical school faculty appointment and the same individual was the only member not related to a university affiliated hospital. Three members conducted private practice in both non-affiliated and affiliated hospitals.

At present eight members are primarily in full-time private practice while two are full-time educators, one of these being a university chancellor and not directly active in a medical school. Three members have neither a faculty appointment and are not related to an affiliated hospital. Four have clinical faculty appointments but conduct private practice in non-affiliated hospitals almost exclusively.

In 1951, 51 per cent of students selected non-affiliated hospitals for their internship, but in 1961, only 46 per cent elected an internship in this type of hospital. Thus, the student selection factor (which is not controllable by the Council) did change in favor of the affiliated hospital.

The AMA Reference Committee substitute resolution in 1962 differs only in form from many other resolutions introduced year after year which no matter how worded express the understandable desire of all hospital attending staffs to enjoy the service and intellectual benefits to be derived from an adequate complement of interns.

The remarkable consistency with which the House of Delegates has supported the Council to strengthen the basic educational purpose of the internship deserves emphasis. It provides ample evidence that the vast majority of delegates recognizes and supports house officer training as educational programs for the primary benefit of the young physician-trainee. By its own actions the House has repeatedly reminded all concerned that dilution of the quality of advanced clinical education can be only harmful to the welfare of medicine and the public it serves.

The Council in composite must represent the greatest possible measure of direct knowledge and experience in the undergraduate, graduate and continuing phases of medical education as well as education in fields importantly related to medicine. These requirements are so broad that they cannot all be found to the necessary degree in single individuals. Thus, it is most important that individuals be selected for Council membership in relationship to these broad needs and the particular competences of the total membership of the Council at the moment.

There are other organizations actively concerned with the educational standards of the several phases of medical and related training. However, none of them except this Council is responsible for standards over the total span of medical education and none but the Council has the intimate welfare of the whole of medicine's public obligation for educational standards as a direct responsibility. The Council must represent far greater, not lesser, competence than any of these other organizations.

Questions were asked of Dr. Wiggins and the subject was discussed by several. It was pointed out that the 1962 Reference Committee substitute resolution was referred to the Board of Trustees for study and recommendation.

RESOLUTION

The resolution dealing with the Council on Medical Education which had been referred for study to the Council of the MSMA House of Delegates was studied. In light of Dr. Wiggins report, it was felt that the first

"Resolve" in the resolution should read: "Resolved, That the reference committee on Amendments to Constitution and By-Laws at the next annual session of the AMA be requested by the Delegates of the MSMA to seriously consider a by-laws provision which would guarantee that the majority representation on the Council of Medical Education shall consist of physicians engaged primarily in the private practice of medicine, and also trained, experienced and participating in graduate and postgraduate medical education programs in private community hospitals, and . . ."

On motion of Dr. Kerr, duly seconded, this resolution with the changes was approved for submission to the AMA House of Delegates.

CONGRESS ON PHARMACY AND MEDICINE

Dr. Peterson reported on a meeting on March 13 at an AMA Congress on Pharmacy and Medicine, which was attended by 340 persons, not enough of whom were physicians. He said that the question of physicians dispensing medicine and that of physicians holding an interest in pharmacies were discussed, but no conclusions were drawn. He suggested that there be a Missouri Liaison Committee with the pharmacists. He also suggested that there should be more Missouri physicians on Committees and Councils of the AMA.

KERR-MILLS LAW

Dr. Peterson reported attending a meeting of representatives of eight states with Mr. Proctor Carter regarding drug programs. He said that from reports of other states he felt the Kerr-Mills act drug program was functioning well in Missouri. He pointed out that in the beginning 13 drugs were covered and that now 34 are. He said costs were based on wholesale price, plus $1.00. He pointed out that pharmacists claim that they are not receiving enough from the plan as the filling of any prescription costs from $1.00 to $1.35. He said that 57 physicians in Missouri dispense drugs and that they now receive the same compensation as do the druggists, namely, cost plus $1.00 per prescription.

OSTEOPATHY AND MEDICINE

Dr. Furlow reported on a meeting of MSMA representatives with the AMA Committee on Osteopathy and Medicine in Chicago April 19. It was pointed out that another meeting will be held during the AMA session in June. Dr. Furlow plans to attend that session and will report any action at the next Council meeting.

STUDENT AMA

A request from the Student American Medical Association for continuation of the $100 sustaining membership was presented. On motion of Dr. Benoit, duly seconded, this was approved and approved to be a part of the Annual MSMA budget.

A request for assistance to send delegates from the University of Missouri Medical School to their Student AMA session in 1964 was presented. On motion, duly seconded, an allowance of $75.00 was approved and was approved to be included in future MSMA annual budgets.

COMMITTEE ON NURSING

A letter from the AMA concerning committees of states to work with committees of nurses was presented.

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On motion of Dr. Benoit, duly seconded, it was voted that the President be authorized to appoint a committee of not more than seven to meet with representatives of the Missouri Nursing Association when requested.

PAST PRESIDENT

Dr. Furlow suggested that the presence of the immediate Past President would be of benefit to the Council. On motion of Dr. Kerr, duly seconded, it was voted to invite the immediate Past President to Council meetings this year and consider a by-law change at the next Annual Session.

DIVISION OF THE STATE

Dr. Furlow called attention to the inconsistency of using the Missouri River as a north and south division of the state, especially in regard to elected officers of the Association. He pointed out that Councilor Districts 1, 2, 4 and 5 had 1,076 members; that Districts 6, 8, 9 and 10 had 695 members; that District 3 had 1,311 members and District 7 had 792. He suggested that such a division was much more appropriate for future House actions than the method of using the Missouri River as the dividing line between North and South. Dr. Whitener pointed out that he was considered as elected from south of the Missouri River.

Dr. Furlow moved that this suggestion be made to the House of Delegates, which was seconded. A motion to table, seconded, lost on vote, and the original motion was passed.

AMA ST. LOUIS SESSION

Mr. O'Brien called attention to the resolution that was passed by the House of Delegates concerning inviting the AMA to hold a session in St. Louis. On motion of Dr. Benoit, duly seconded, it was voted to invite the AMA to meet in St. Louis at an early time.

FIELD SECRETARY REPORT

Mr. McIntyre reported on meetings since the Annual Session. He told of the work of the Placement Bureau of the Association and discussed the work of the Sears-Roebuck Foundation, which does surveying of localities wanting a physician and gives advice to them on building offices for doctors.

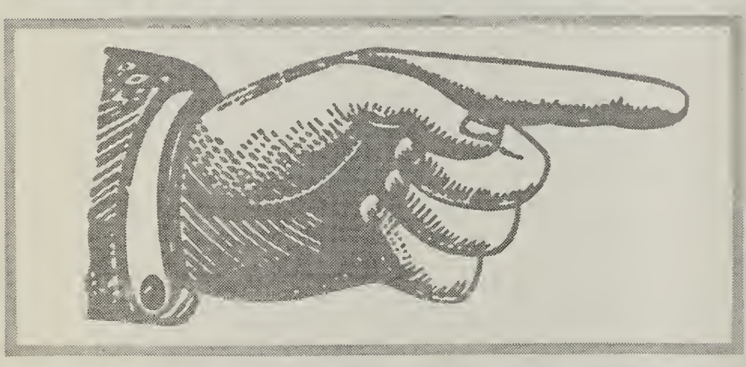
He reported a meeting of the Missouri Health Council held April 17 at the University of Missouri Medical School which had for its subject "Health Care and Its Costs." He said that hospital care, public health, mental health and the vendor program were discussed.

He called attention to the Spring Clinical Conference to be held at the University of Missouri on May 20 and 21. He told of the Central Missouri Area Medical meeting at Whiteman Air Force Base on May 6. He called attention, as had Dr. McCraw and Mr. Schnedler to the two-day visit of Dr. Annis in Springfield on May 21-22.

HOME FOR PHYSICIANS

The resolution passed by the House of Delegates concerning a home for aged or incapacitated physicians was

more
physicians
specify



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discussed but it was felt that the intent of the resolution was not clear enough and action was delayed until more information could be obtained.

SECOND COUNCILOR DISTRICT

The resignation of Dr. Harry Greene as Councilor of the Second District was presented, together with correspondence with delegates from that District. Since there was no consensus on an appointee, it was felt that another attempt should be made, probably through presidents of the component societies, and action be delayed.

TUBERCULOSIS COMMITTEE REPORT

Dr. Kerr gave the following report for the Committee on Tuberculosis:

The Committee on Tuberculosis met jointly with the Missouri Tuberculosis Association at the Missouri Hotel, Jefferson City, on May 3, 1964, with Dr. Florence E. MacInnis, Chairman, presiding.

Missouri Tuberculosis Association—The Executive Committee of the Missouri Tuberculosis Association asked for consideration by the MSMA Committee on Tuberculosis of the problem regarding expense of re-examination x-rays needed by discharged tuberculosis patients from the State Tuberculosis Sanatorium at Mt. Vernon. Local Tuberculosis Associations do not have funds sufficient to cover the cost of all the re-x-rays required by discharged patients. Such patients require x-rays at varied intervals, most of them as often as every three months. With increased life expectancy this can be an increasing burden. The policy formerly adhered to was for Voluntary Tuberculosis Associations to pay for diagnostic x-rays but not for follow-up re-x-rays. Tax funds were used for these re-x-rays; these were allocated by the County Courts.

Following discussion, motion was approved to form a subcommittee to study this problem.

Outstate Medically Indigent Tuberculosis Care—A Resolution introduced at the 1964 Annual Session regarding "Outstate Medically Indigent Tuberculosis Care" was referred by the Reference Committee on Medical Education and Public Welfare to the Tuberculosis Committee for further study.

Following discussion, a motion was approved which was made by Dr. Polk, seconded by Dr. Roberts to have the Chairman appoint a special sub-committee to study the problem and report results to the Committee on Tuberculosis. The sub-committee appointees should include the best possible geographic representation across the state.

Utilization of State Regulations—Attention was called to regulations regarding tuberculosis patient commitment and isolation. All physicians are urged to apply these laws in the best interest of the patient and general public.

Task Force on Tuberculosis Control—Reference was made to the report "The Future of Tuberculosis Control," copies of which were mailed April 20, 1964 to the members of the Tuberculosis Committee by the

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Missouri Tuberculosis Association. This report was made to Dr. Luther L. Terry, Surgeon General of the Public Health Service by the seven men representing Public Health, Medical Education and Practice, and the Public, whom he asked to serve on a Task Force on Tuberculosis. On asking them to serve, he asked them to consider the present unsatisfactory situation in tuberculosis and to recommend steps the Public Health Service might take to remedy it. The report was published by the United States Department of Health, Education and Welfare (No. 1119, December, 1963).

A motion for acceptance of this report suggesting its implementation by the Missouri Division of Health was approved.

On motion of Dr. Benoit, duly seconded, the report was accepted.

JEFFERSON CITY OFFICE

The report of the Reference Committee of the House of Delegates concerning a branch office in Jefferson City was discussed. On motion of Dr. Furlow, duly seconded, it was voted that the Chairman of the Council appoint a committee, one representative from each District, who has served as President, Councilor or Speaker of the House, to study the report and to present the information requested at the earliest possible date. On second, the motion carried.

PROGRAM

Dr. Matthews outlined the proposed program for the 1965 session.

He discussed the timing of the Annual Session, stating that some thought had been given to beginning them on Thursday evening and ending with the Delegates' breakfast on Sunday morning. After determining that such dates could be obtained for 1966, on motion of Dr. Benoit, duly seconded, it was voted to hold the 1966 session March 24 to 27, and the 1967 session March 18 to 22.

COUNCILORS' REPORTS

The Councilors reported on activities in their districts.

CIVIL DEFENSE

A request from Dr. Carl D. Siegel, Chairman of the Committee on Civil Defense Disaster Medical Care, that $100 be made available for a program at the University of Missouri on Civil Defense. On motion of Dr. Fisher, duly seconded, this was approved.

A request from Dr. Siegel for $56 to defray some of the expense of attending an HEW meeting on radiological defense, on motion of Dr. Benoit, duly seconded, was approved.

MISSOURI STATE MEDICAL FOUNDATION

Dr. Furlow reported that the Woman's Auxiliary to the MSMA has officially turned over to the Foundation their Loan Fund Account including approximately $4,000 in cash and some $8,000 in outstanding loans.

NEXT MEETING

It was decided that the next meeting of the Council would be held September 26 and 27.

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County Society News

FIRST DISTRICT

JOSEPH L. FISHER, COUNCILOR, ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

One hundred physicians and dentists from Northwest Missouri and Northeast Kansas attended the annual joint dinner and program of the Buchanan County Medical Society and the Northwest Missouri Dental Society on May 6. Presiding jointly were the two organization presidents, Dr. William B. Rost, Medical Society; and Dr. Harold W. Allen, Lathrop, Dental Society.

Speaker for the event was Dr. James C. White, neurosurgeon of Boston, Mass., who came to St. Joseph at the invitation of the Thompson Brumm Knepper Clinic to present the 15th annual Dr. F. G. Thompson Sr. lecture. Dr. White presented a paper, well illustrated with slides, on "Somatic and Visceral Pain With Evaluation of Neurosurgical Methods for Its Relief." He also discussed reduction of pain in cephalic and upper cervical neuralgias. Dr. Edmund W. Kline, program chairman, presented Dr. F. G. Thompson Jr., who introduced the speaker.

IRWIN ROSENTHAL, M.D., *Secretary*

MEETING OF JUNE 3

Dr. C. W. Meinershagen, of the Missouri Division of Health, was the speaker at the June 3 meeting of the Buchanan County Medical Society. The program followed a social period, dinner and a business meeting in the Oak Room of Hotel Robidoux.

Dr. Meinershagen spoke on "Current Aspects and Changing Concepts in the Control of VD." He was assisted by Mr. Mike Morgan, Field Agent for the Division of Health, who showed a film on the control of syphilis. The speaker called attention to the paradox of syphilis; though there is a specific diagnosis and a specific cure for the disease, it has nevertheless been on the rise in this country since 1957. He stressed the importance of cooperation between doctors and public health departments in locating the source of the spread of syphilis.

Dr. Edmund W. Kline, program chairman, introduced the speaker. Dr. William B. Rost, president, presided at the meeting.

IRWIN ROSENTHAL, M.D., *Secretary*

GRAND RIVER MEDICAL SOCIETY

A. E. Upsher, M.D., pathologist, Kansas City, spoke at a meeting of the Grand River Medical Society at the Strand Hotel in Chillicothe on Thursday night, May 14. The Woman's Auxiliary to the Society met with the doctors for dinner and then held a separate meeting while Dr. Upsher presented his interesting discussion to the physicians.

JACK VINYARD, M.D., *Secretary*

MEETING OF JUNE 11

The June meeting of the Grand River Medical Society and its Woman's Auxiliary was held at the Strand Hotel in Chillicothe on Thursday night, June 11. This affair began with a social hour followed by dinner and then the program.

The scientific talk of the evening was presented by George Miles, M.D., surgeon of Kansas City. Dr. Miles' discussion was of particular interest to the group which is indebted to him for his presentation.

JACK L. VINYARD, M.D., *Secretary*

SECOND DISTRICT

HARRY L. GREENE, HANNIBAL, COUNCILOR

CHARITON-MACON-MONROE-RANDOLPH COUNTY MEDICAL SOCIETY

The regular monthly dinner meeting of the Chariton-Macon-Monroe-Randolph County Medical Society was held Thursday evening, May 14, at the Woodland Hospital in Moberly. The featured speaker for the evening was Charles B. Wheeler, M.D., Pathologist, Research Hospital, Kansas City, who spoke on, "Forensic Medicine." Dr. Wheeler is much interested in a medical examiners system for the State of Missouri which would provide trained pathologists as coroners for the entire state.

Members present were: Drs. D. E. Eggleston, Howard Miller and James Campbell, Macon County; F. L. Harms, D. D. Stuart, and G. C. Rice, Chariton County; Josephine Baker, A. P. Rowlette, Thomas S. Fleming, J. W. Fleming Jr., Robert H. Young, W. Deward Chute, C. C. Cohrs, L. E. Huber, Robert Hasson, P. V. Dreyer and C. C. Smith, Randolph County; and F. A. Barnett of Monroe County. Dr. Leopold Lachance of Centralia was a guest.

J. WILL FLEMING JR., M.D., *Secretary*

FOURTH DISTRICT

PAUL H. ROTHER, ST. CHARLES, COUNCILOR

LINCOLN-ST. CHARLES COUNTY MEDICAL SOCIETY

A dinner meeting of the Lincoln-St. Charles County Medical Society was held on Tuesday

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evening, May 26, at the Southern Air in Wentzville.

The scientific program for the evening was given by Burl M. Dillard, M.D. of St. Louis, who spoke on "Diagnosis and Treatment of Cancer of the Colon." Following Dr. Dillard's presentation questions from the audience were presented and discussed.

ROBERT J. FLEMING, M.D., *Secretary*

MEETING OF JUNE 30

A dinner meeting of the Lincoln-St. Charles County Medical Society was held at the Golfview Inn, St. Charles, Mo., Tuesday night, June 30.

Drs. Creech, Gunn and Fleming discuss the pamphlet following the meeting.

The evening festivities began with a social hour followed by a tasty steak dinner and then the formal program. The speaker for the evening was Walter T. Gunn, M.D., St. Louis, who spoke on AMPAC and MMPAC. Following his presentation a general discussion completed the evening's program.

ROBERT J. FLEMING, M.D., *Secretary*

SIXTH DISTRICT

ROLLA B. WRAY, NEVADA, COUNCILOR

HENRY, JOHNSON, PETTIS, SALINE COUNTY MEDICAL SOCIETIES

The annual Spring Dinner Meeting of the physicians in the area of the Whiteman Air Force Base was again held at the base on Wednesday evening, May 6. More than 150 people were present including physicians, their wives, guests and personnel of the 805th Medical Group of the base. The evening festivities began with a social hour at the Officer's Club followed by dinner and then the formal program.

General Humphreys was featured speaker.

The featured speaker for the evening was Brigadier General J. W. Humphreys Jr., USAF, MC, who is Commander, Wilford Hall USAF Hospital, San Antonio, Tex. He also serves as surgeon and Chief of Medical Specialties and Director of Land Based Medical Recovery Facilities for Project Mercury. The subject of General Humphreys' discussion for the evening was, "The USAF Hospital System."

Dr. Rolla B. Wray of Nevada, Councilor of the 6th District of the MSMA, was introduced and took opportunity to make a few brief remarks.

Doctors and their wives numbered more than 150.

In the afternoon prior to the evening meeting a tour for men only was conducted through a missile site. In addition a number of physicians took advantage of the golf course facilities at the base. The local arrangements for this fine occasion were made by Col. E. J. Kloess, Commander of the 805th Medical Group at the base.

ROLLA B. WRAY, M.D., *Councilor*

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

The Lafayette-Ray County Medical Society met in Lexington on April 14 for a social hour and dinner. Fifteen persons, including members and wives were present.

During the short business meeting which followed, the application for membership of Capt. Donald E. Baker, USAF, MC, was approved by the society. In further business, Dr. W. C. LaHue was designated as delegate to the County Medical Society Officer's Conference.

Dr. Tom Cook gave a résumé of the State Convention, at which he was a delegate, and passed on information which he had received there. Following a brief discussion, the meeting adjourned.

W. C. LaHue, M.D., *Secretary*

West Central Missouri Medical Society

The annual meeting of the Vernon County Bar Association and the West Central Missouri Medical Society was held at the country club in Nevada, Thursday, June 11. The meeting was preceded by a pleasant social hour and dinner. The total attendance at the meeting, doctors and lawyers, was 42.

Following the dinner, there was a panel discussion on the evaluation of workman's compensation injuries. Panelists were Mr. Vernon Meyer, compensation commission referee, St. Louis, Mo.; Mr. Jack Robertson, attorney, Kansas City, Mo.; and Dr. Charles Vilmer, orthopedic surgeon, Kansas City, Mo. Each panelist made a short presentation of his particular field in the evaluation of compensation cases and then there was a question and answer period. The entire program was favorably received.

Following this meeting, there was a brief business session of the West Central Missouri Medical Society. The transfer of Dr. William W. Haynie from the Clay County Medical Society to the West Central Missouri Medical Society was accepted. Dr. Curtis Long was accepted for junior membership in the Society effective July 1, 1964. It was announced that the next meeting of the Society would be in Harrisonville, in September. There being no further business, the meeting was adjourned.

Roy W. Pearse Jr., M.D., *Secretary*

NINTH DISTRICT

E. A. STRICKER, ST. JAMES, COUNCILOR

Mid-Missouri County Medical Society

The Mid-Missouri Medical Society held a special dinner meeting Thursday night, May 28, at the Edwin Long Hotel in Rolla in honor of Christiana V. Hammler, M.D., St. James, a member of the Society who has completed 50 years in the practice of medicine. The evening festivities began with a social hour followed by dinner and then the regular program for the evening. Dr. Hammler was presented a 50 year pin from the MSMA by Dr. E. J. Froelich from Lebanon. Dr. Froelich received his 50 year pin from the MSMA in 1962. A special guest on the occasion was Olaba T. Nelson, nurse, of St. James, who has worked with Dr. Hammler for the last 49 years. A special service plaque from the local Society was presented to nurse Nelson. Dr. Hammler is one of three women doctor members of the Mid-Missouri Medical Society. The other two are Dr. Alice Crosby of Salem and Dr. Barbara E. Russell of Rolla.

Dr. Hammler receives 50 Year Pin from Dr. Froelich.

Drs. Furlow, Russell, Hammler, Crosby and Rae Froelich get together at end of meeting.

The guest speaker for the evening program was Leonard T. Furlow, M.D., St. Louis, President of the MSMA. Dr. Furlow presented a most practical and interesting discussion on "What the GP Should Know About Recent Advances in Neurosurgery."

Thirty people including doctors, their wives and guests were in attendance. Dr. E. A. Stricker of St. James, Councilor of the 9th District, MSMA, served as Master of Ceremonies. Dr. Rae Froelich of Lebanon is President of the Society.

M. K. Underwood, M.D., *Secretary*

TENTH DISTRICT

W. D. ENGLISH, CARDWELL, COUNCILOR

Mineral Area County Medical Society

The meeting of May 28 opened with some remarks by Paul R. Whitener, M.D., President-elect of the Missouri State Medical Association. Following this there was a scientific discussion on "The Aging Kidney" conducted by Professor R. O. Muether of St. Louis University.

The business meeting was attended by Drs. Bull, Dennis, Burcham, Oliver, Watkins, Appleberry, Haw, Hunt, Osborn, Ford, Patton, Hoctor, Huckstep, Taylor and Chastain. A guest was Dr. Saldano of the State Hospital. Dr. Chastain was present for part of the scientific meeting but was not there for the business meeting.

The application of Marie Frain of Farmington was approved unanimously for membership in the County and State Medical Associations. It was voted to send flowers to the family of Dr. J. F. Foster in sympathy with the recent death of his son.

A motion was made by Dr. Bull and approved unanimously that the Mineral Area Medical Society go on record as approving the authority of the State Board of Medical Examiners for the Healing Arts of Missouri to consider the moral, ethical and professional qualifications of all applicants. The membership felt that the Board as a duly appointed authority of the State of Missouri should have final decision in these matters.

A committee consisting of Dr. Watkins, Dr. Haw and Dr. Chastain was appointed to prepare a letter embodying this resolution to be transmitted to the Governor, Dr. William Perry, *The Globe*, *The Post-Dispatch*, and the Missouri State Medical Association.

It was moved by Dr. Watkins and seconded by Dr. Appleberry to have Dr. Bull represent us as concerns the question of possible transfer of a portion of the officers of the State Medical Association to the State Capitol. In general, the membership felt that this was not an advisable change.

The meeting was presided over by Dr. Oliver.

C. W. Chastain, M.D., *Secretary*

SEMINAR ON CHEST DISEASES

A one day Seminar on "New Concepts in Chest Diseases" of interest not only to general practitioners, but to internists and others who treat respiratory diseases, will be held on Sunday, August 23, Starlight Roof, Chase Hotel.

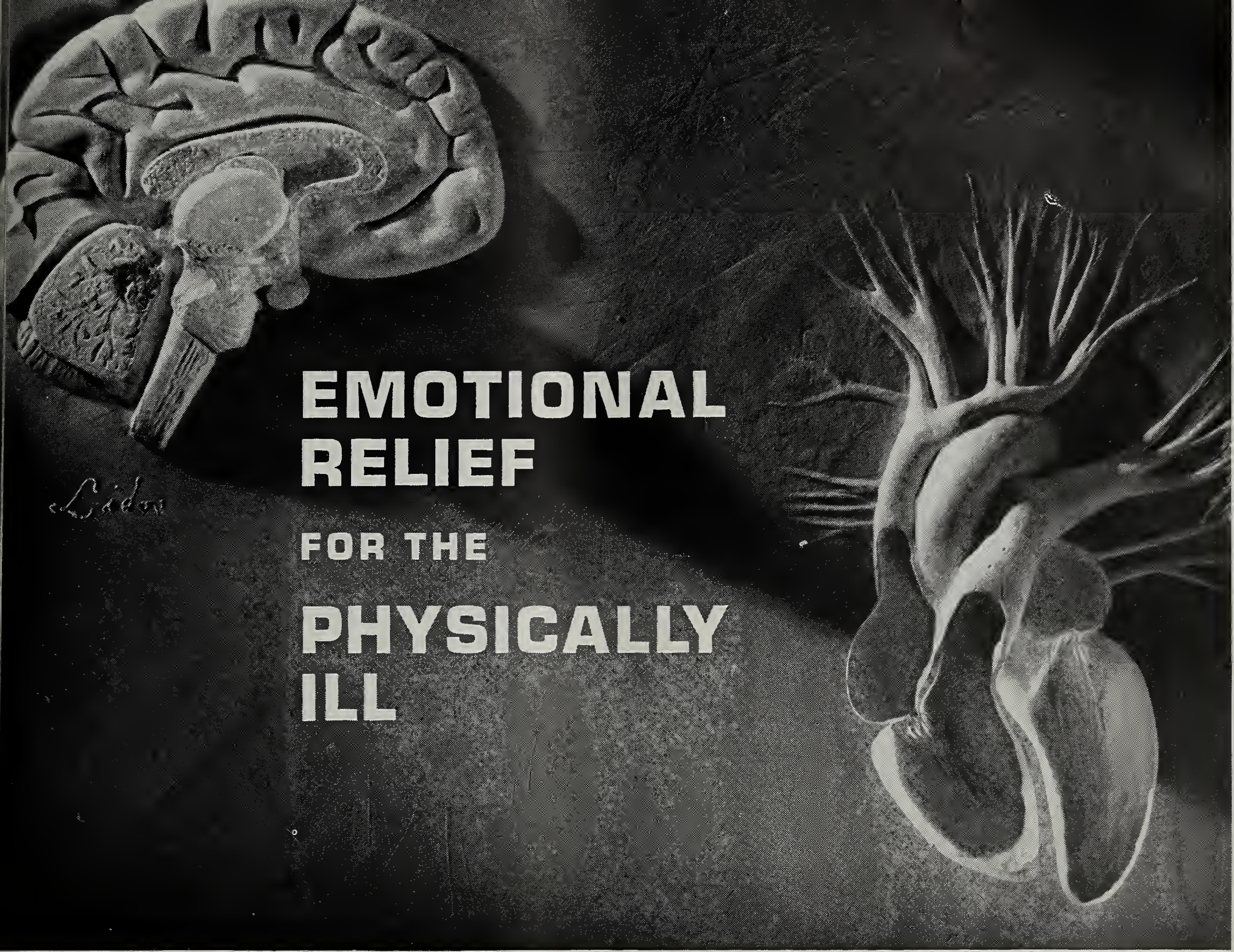
During the morning sessions a panel of eminent out-of-state speakers will discuss "Epidemiology of Tuberculosis"—atypical bacilli and complications; and "Interpretation of Diagnostic Tests"—therapy and control of tuberculosis. In the afternoon a special opportunity is being offered to preview "White Blood Cells," a new movie of outstanding electron microscopy. Topics to be discussed following this 15-minute movie are "Epidemiology of Respiratory Viruses," "Vaccines, Therapy and Control," and "Clinical Variations in Respiratory Viruses—Diagnostic Tests."

This program will be presented by the St. Louis Academy of General Practice, the Missouri Academy of General Practice, and the Missouri Division of Health in cooperation with the Communicable Disease Center of the Public Health Service.

An invitation to attend this seminar is extended to all physicians of the St. Louis and surrounding area. The program will begin at 9:00 a.m. Although August is a hot month, it is felt that those who attend the seminar in the air-conditioned Chase Hotel will find it comfortably cool. A luncheon will be served in the Zodiac Lounge at 12:00 noon and tickets at a cost of $3.75 per person will be available at the time of registration.

This seminar is acceptable for six accredited hours by the American Academy of General Practice, and it is felt that any physician attending will find the time profitably spent. There is no registration fee.

Announcement letters and programs are being mailed, and all physicians planning to attend are requested to mail in the enrollment form to St. Louis Academy of General Practice, 3839 Lindell Blvd., St. Louis, Mo., or call the St. Louis Academy office—JE 5-6355.



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From the Medical Schools

UNIVERSITY OF MISSOURI

Dr. C. W. Dixon, professor of Preventive and Social Medicine, University of Otago, in Dunedin, New Zealand, was a visitor and guest lecturer in the Department of Community Health and Medical Practice of the University of Missouri Medical Center from May 14 to May 19. Dr. Dixon lectured on "Socialized Medicine in New Zealand" and "Smallpox as an International Health Problem."

Trips and Talks

Dr. Frank B. Engley Jr., professor and chairman of the Department of Microbiology at the University of Missouri Medical Center, attended the Executive Board Committee meeting of the Missouri Public Health Association in Jefferson City on May 27. He also participated in Medical Grand Rounds on Tularemia on May 28.

Dr. Herbert S. Goldberg, professor of microbiology, attended a seminar in Medical Teaching held at the University of Southern California, School of Medicine. Topics under discussion included evaluation of students, programmed instruction, television in teaching and similar topics in teaching and learning in medical school. The seminar was sponsored by the Association of American Medical Colleges from June 14 to 17 in Los Angeles, Calif.

Dr. William T. Griffin, instructor in obstetrics and gynecology at the University of Missouri Medical Center, attended the annual meeting of the American College of Obstetricians and Gynecologists held in Miami Beach, Fla. on May 15 through 23.

Dr. David G. Hall, M.D., professor and chairman of the Department of Obstetrics and Gynecology, attended the annual meeting of the American College of Obstetricians and Gynecologists in Miami Beach, Fla., along with Dr. Griffin and Dr. Russell E. Hanlon, M.D., assistant professor of obstetrics and gynecology.

Dr. Hanlon also lectured on "Management of Toxemias of Pregnancy" in Washington, Mo., for the Franklin-Gasconade-Warren County Postgraduate Study Club on June 2.

Dr. Robert E. Froelich, M.D., assistant professor of psychiatry and head of the Department of Medical Communications, and Dr. Barton Griffith of Instructional Television attended the two day session where latest uses of television in professional education were presented. The meeting was sponsored by the Council on Medical Television in Atlanta, Ga. May 19 and 20.

Dr. Theodore F. Henrichs, Ph.D., assistant professor of clinical psychology, attended the Midwestern Psychological Association meeting in St. Louis on April 30 to May 1. While there, Dr. Henrichs attended symposia and presentations primarily involving psychological assessment of CNS dysfunction and the nature of actuarial methods in diagnosis and behavior description. About 3,000 psychologists attended the meeting.

Dr. Donald F. Kausch, Ph.D., assistant professor of clinical psychology attended the meeting of the Midwestern Psychological Association also with Dr. Henrichs and Dr. David G. McDonald, assistant professor of clinical psychology.

Philip J. Marco, M.D., assistant professor of psychiatry; John Landor, M.D., associate professor of surgery, and Nathan C. Galloway, M.D., assistant professor of medicine, attended a meeting of the medical staff of Blessing Hospital in Quincy, Ill., on May 28. The topic of discussion was the peptic ulcer from psychiatric, medical and surgical approach—new and standard treatments and possible etiology. Dr. Marco, Dr. Landor and Dr. Galloway participated in panel discussions on the subject.

James M. A. Weiss, M.D., professor and chairman of the Department of Psychiatry; Philip J. Marco, M.D., assistant professor of Psychiatry, and Albert Glass, M.D., attended the Post Graduate Medical Education Committee Spring Clinical Conference at the University of Missouri Medical Center on May 21. They discussed psychiatric emergencies in general hospital settings and frequent psychiatric syndromes creating emergencies.

Fernando Tapia, M.D., associate professor of child psychiatry, gave a brief talk on the teenager and his needs to the Boone County Mental Health Association on May 26 and 28. He then answered questions phoned to the station. The program was telecast by the local television and

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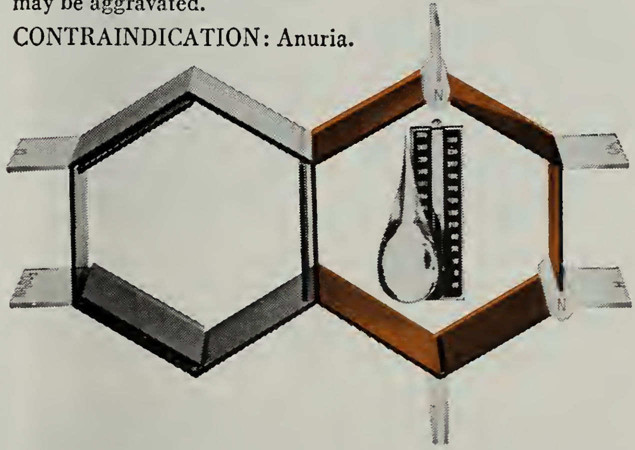

1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. *J. Amer. Geriat. Soc.* 11:945 (Oct.) 1963.
2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

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radio stations. Dr. Tapia also gave a 45 minute talk on the need of a sheltered workshop to the Columbia Cosmopolitan Club on May 28. He then reported on a survey which he had carried out.

Joan L. Webb, M.D., resident in psychiatry, attended the annual meeting of the American Orthopsychiatric Association in Chicago on March 18 to 21. The meeting concerned the Responsibility for Social Change.

George F. Keonig, radiologic technologist at the University of Missouri Medical Center, attended the American Society of Radiologic Technologists in Minneapolis, Minn., on May 29 to June 11. At the meeting he conducted a full-day workshop, moderated a panel on Postgraduate Education, attended pre- and post-convention Board of Directors meeting, attended meetings on the standardization of terminology and other meetings and functions relative to duties of Chairman of the Education Committee.

Gwilym S. Lodwick, M.D., professor and chairman of the Department of Radiology, was vice president of the American Registry of Radiologic Technicians and is now Senior Trustee and President of the organization. The Board needs to establish examinations for radiologic, isotope and radiation therapy technologists, to set policy for educational requirements.

John F. Patton, M.D., acting chairman of the Department of Surgery, attended the American Association of Genitourinary Surgeons in Rye, N. Y. on May 6 through 8 and presented a paper on "Gram-negative Septicemia" for the genitourinary surgeons attending the meeting.

Kenneth K. Keown, M.D., professor of anesthesiology, participated as a guest clinician for the continuing education course, "Intensive Review of the Science of Anesthesiology" at the University of Tennessee in Memphis on May 18 to 22. The meeting was sponsored by the Department of Continuing Education of the University of Tennessee.

C. Robert Schmidt, M.D., first year resident in anesthesiology; George R. Gay, M.D., resident physician in anesthesiology, and Edward E. Sammons, M.D., second year resident in anesthesiology, attended the Midwest Anesthesia Residents Meeting in Iowa City, Iowa, on May 23 to 24.

John H. Landor, M.D., associate professor of surgery at the University of Missouri Medical Center, gave a talk on gastric hypothermia and gastric freezing to the Memorial Hospital staff in Jefferson City May 13.

Kenneth K. Keown, M.D., professor of anesthesiology, was a member of a panel entitled "Cardiac Arrest" at a meeting of the Texas Medical Association in Houston. He also presented a lecture entitled "Anesthesia for Patients with Heart Disease" and "The Recognition of Heart Failure in the Anesthetized Patient." Dr. Keown was a guest of the Texas Society of Anesthesiologists and the Texas Medical Association at their Ninety-Seventh Annual Meeting. Dr. Keown also attended a meeting in Washington, Missouri where he gave a talk entitled "Local Anesthesia." The meeting was sponsored by the AAGP Postgraduate Study Club of Gasconade, Warren and Franklin Counties of Missouri.

Dr. S. P. W. Black, professor of surgery, and Dr. Warren P. Sights, associate professor of surgery, attended the annual meeting of the Harvey Cushing Society in Los Angeles, Calif., on April 19 through 22.

WASHINGTON UNIVERSITY

Dr. Carl V. Moore, head of the department of medicine and former dean, has been named to the newly-created post of Vice-Chancellor for Medical Affairs of Washington University. Dr. Moore has also been named president of the Washington University School of Medicine and Associated Hospitals medical center.

His position as president has been ratified by the member institutions which include the School

Carl V. Moore

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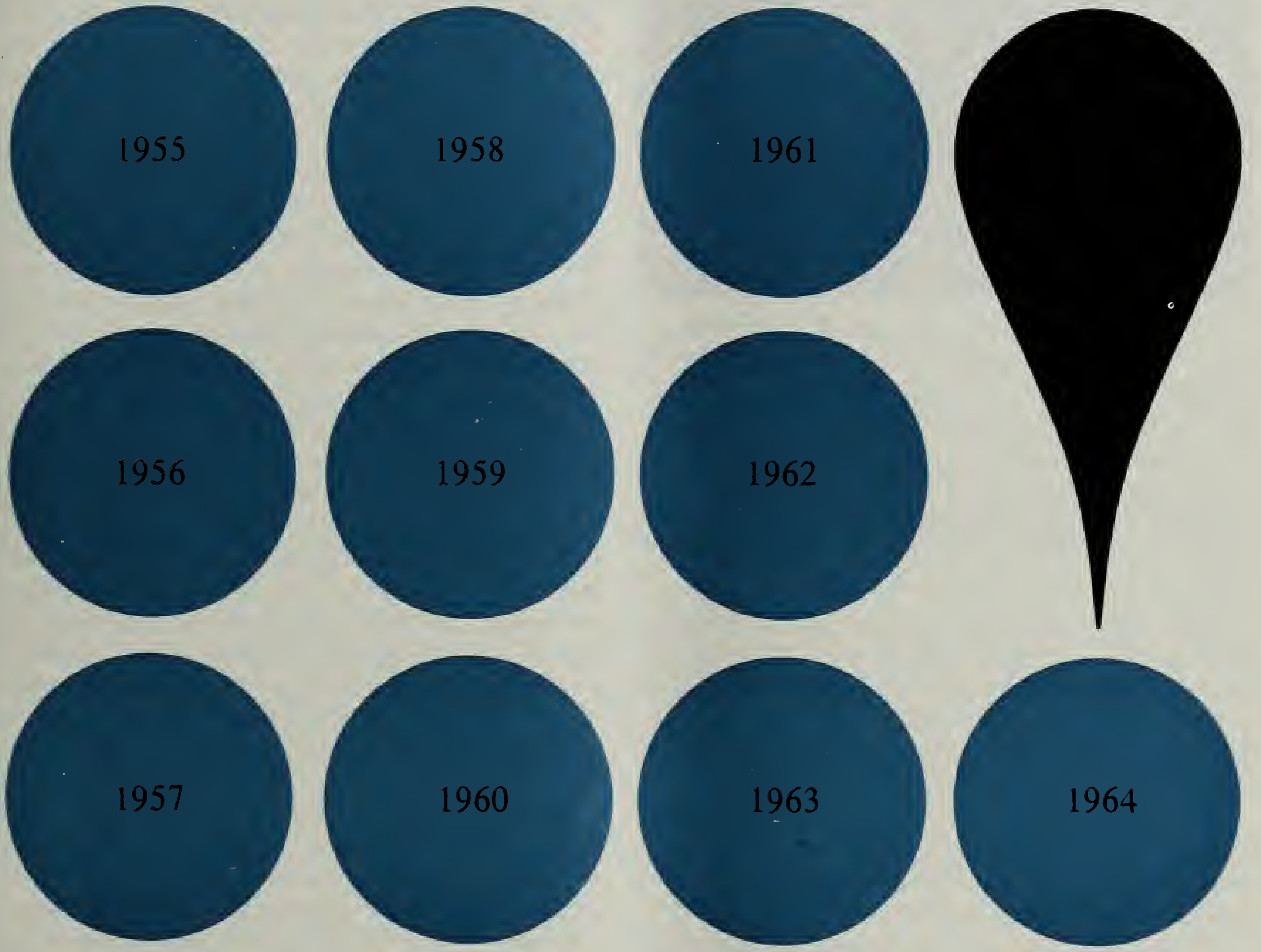

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This free-form concrete and stained glass sculpture, a memorial to the late John Talbot, assistant to former Chancellor Arthur Compton of Washington University, has been dedicated in the Irene Walter Johnson Institute of Rehabilitation, part of the Washington University School of Medicine. The Memorial was designed by the late Mr. Talbot's son, William Talbot (pictured) of Washington, Conn. The motto surrounding the memorial says, "Caring Is the Great Thing—Caring Matters Most."

of Medicine, Barnes, St. Louis Maternity, McMillan and Renard and the David P. Wohl Jr. Memorial hospitals, Wohl Memorial-Washington University Clinics, St. Louis Children's Hospital, Barnard Free Skin and Cancer Hospital and the Jewish Hospital of St. Louis.

The position of vice-chancellor who would also serve as president of the medical center, was proposed in a recent report submitted by two outside consultants.

The medical center was formed two years ago to serve as a planning and advisory agency for the medical school and member hospitals on new construction and renovation of existing buildings, expansion through new acquisitions, questions concerning fund-raising and budgeting. A comprehensive plan for the development of the area has been authorized and is now under consideration.

Promotions and Appointments

Promotions of several faculty members of the Washington University School of Medicine became effective July 1. Dr. Harvey Lester White and Dr. Arthur Scott Gilson Jr., were named Professors Emeritus of physiology. Dr. White, who will continue as chairman of the department of physiology for the year 1964-1965, has been on the faculty since 1921 and Dr. Gilson since 1925. Dr. Margaret Gladys Smith, who joined the staff in 1929, has been designated Professor Emeritus of pathology.

Advanced to the rank of full professor are Dr. Harvey Raymond Butcher Jr., surgery; Dr. Donald H. Eldredge, research professor of otolaryngology; Dr. Samuel B. Guze, psychiatry; Dr. Carl Gayler Harford, medicine and Dr. John Russell Smith, medicine; Dr. John Esben Kirk, gerontology; Dr. Gordon Marcus Schoeplfe, physiology; Dr. William W. Sleator Jr., biophysics in physiology and Dr. Leonard Joseph Tolmach, radiation biology in the department of radiology.

Associate professors are Dr. Elmer Burrell Brown, medicine; Dr. Robert Main Burton, pharmacology; Dr. John Michael Kissane, pathology; Dr. John Neal Middelkamp, pediatrics; Dr. William T. Newton, surgery; Dr. Roy R. Peterson, anatomy; Dr. Leonard Berg, clinical neurology; Dr. Marvin J. Friedenberg, radiology; Dr. H. Mitchell Perry Jr., medicine, and Dr. William H. McAlister, radiology.

Named assistant professors are Dr. Robert Burstein, clinical obstetrics and gynecology; Dr. Frank J. Catanzaro, medicine; Dr. Lawrence A. Coben, neurology; Dr. Harold Cutler, clinical otolaryngology; Dr. Ronald Frederick Dorfman, pathology; Dr. Mark D. Eagelton Jr., clinical radiology; Dr. Harry A. Fozzard, medicine; Dr. John Calvin Glidewell, research assistant professor in medical psychology; Dr. J. Roger Nelson, clinical medicine; Dr. James Clark Peden Jr., preventive medicine and medicine; Dr. Ferris N. Pitts Jr., psychiatry; Dr. H. M. Smit, clinical otolaryngology; Roger Elliot Theis, physiology; Dr. Lewis J. Thomas Jr., anesthesiology and Dr. Stuart Weiss, clinical neurology.

Dr. Eugene M. Bricker has been elected a member of the Washington University board of directors. Dr. Bricker, an assistant professor of clinical surgery in the School of Medicine, will represent the school on the University board. Dr. Bricker has also been elected vice president of the St. Louis city and county unit of the American Cancer Society.

Mr. Chester R. Gough has been appointed deputy librarian at Washington University School of Medicine. Mr. Gough, who was reference librarian at Columbia University Medical Library, joined the Washington University staff in July. Mr. Gough holds degrees from Providence College and Columbia University and is now completing requirements for his Doctor of Library Science at Columbia University. Mr. Gough has been engaged in planning for the joint Harvard-Yale-Columbia computer cataloging project and the United States Public Health Service's Parkinson's Disease Information Center at the University.

Gifts and Awards

Mr. Charles H. Yalem has given $50,000 to Washington University School of Medicine. The gift will support research in the Department of Psychiatry. This gift has established the Charles and Florence Yalem Research Fund in Psychiatry, named for the donor and his wife. Funds will be used for both clinical and biochemical investigations of various types of mental disorders. Mr. Yalem, who is president of the Aetna Finance Company, St. Louis, has been a generous contributor to University activities. At the School of Medicine he previously established a prize fund in memory of his son, James Henry Yalem, who was killed in World War II. This prize is awarded annually to the senior student who excels in the study of dermatology.

Dr. Sarah A. Luse, professor of anatomy and pathology is the recipient of a $50,000 medical research grant from the Alexandrine and Alexander L. Sinsheimer Fund. Dr. Luse has been studying experimental or developmental alteration of the nervous system and brain tumors utilizing the electron microscope. The Sinsheimer fund was established under the will of the late Alexandrine Sinsheimer. The will dictates that income from the trust be applied to "the prosecution of scientific research relating to the prevention or cure of human disease."

Washington University has been awarded a National Institute of Health grant of $33,332 to conduct research in bio-medical information processing by the United States Public Health Service.

For the fifth consecutive year, Washington University School of Medicine has been awarded a $5,000 unrestricted grant for eye research by Research to Prevent Blindness, Inc. Since 1960 the School of Medicine has received $25,000 from the organization. Treatment and diagnosis techniques for glaucoma have been under study.

Student Honors

Charles Wallas was awarded the Borden Undergraduate Research Prize of $500 for a study on *Staphylococcus aureus* at the senior honors ceremonies at Washington University School of Medicine June 7. Wallas was also awarded the Jacques J. Bronfenbrenner Memorial award for outstanding work in the field of infectious diseases.

Ronald G. Evens was named recipient of the Alpha Omega Alpha prize for maintaining the highest four year scholastic average. He also received the Medical Fund Society prize for excelling in the study of internal medicine and was recognized for winning a Sherd-Sanford prize from the American Society of Clinical Pathologists.

The Dr. Richard Brookings Medical School prize went to Evan Eisenberg for a study of an enzyme's action on muscle fibers. The Dr. Robert Carter Medical School prize was awarded to E. Mitchell Singleton for a thesis on "Studies on Mast Cells." These two prizes are awarded annually for meritorious research or other performance carried on by students in the School of Medicine. They are made possible through residual funds specified in the will of Mr. Robert S. Brookings.

John Ey received the Medical Fund Society prize for the senior student who excels in the study of surgery. The Sidney L. Schwab Book prize in neurology went to Judith Higgins Donegan. Mrs. Donegan also received an honorable mention citation from the American Medical Women's Association for ranking in the top 10 per cent of the class.

The Missouri State Medical Association annual award to an honor graduate went to James C. Ellsasser. Five students received the C. V. Mosby Company Book awards for high general scholastic standing and research achievement. They were John Bigger, Donald Eiler, Wylie Hembree, Hugh Tilson and Morris Wise.

Dr. Dana W. Atchley, emeritus professor of clinical medicine at Columbia University's College of Physicians and Surgeons, spoke at the senior honors ceremonies.

Dr. Atchley stated that the establishment of full time clinical departments in medical schools is the chief factor responsible for producing the competent physicians of today. Dr. Atchley also said the era of general practice was decreasing; however, he was critical of too narrow specialization. "Medicine's critical problem in our time is found in the actual practice of medicine, and the recurrent and controversial questions are: how best can the scientifically trained physician act as a healer; and, can compassionate concern for a sick person be combined with the austere judgments that are demanded by a scientific discipline."

Dr. Atchley expressed a hope to the graduating physicians for the development of a true

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"Hydrochlorothiazide [Esidrix] lowers the blood pressure, and its antihypertensive activity is potentiated by syrosingopine [Singoserp], allowing for a reduction of the dose of diuretic substance without a decrease in control of the disease."[2]

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Indications: Mild to moderate hypertension, especially when complicated by edema.

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Occasional side effect: nasal congestion. Rare side effects: gastric irritation, drowsiness, fatigue, nausea, headache, emotional depression, skin rash, restlessness, anxiety.

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Pay special attention to electrolyte balance of patients with severe renal or hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma. Contraindicated in patients with oliguria and complete renal shutdown.

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References

1. Kolodny, A. L., and Dabolins, R.: Angiology *11*:180 (June) 1960.
2. Bare, W. W.: J. Amer. Geriat. Soc. *8*:795 (Oct.) 1960.
3. Lisan, P., and Balaban, S. A.: J. Amer. Geriat. Soc. *8*:803 (Oct.) 1960.

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family physician responsible for the total individual, equally concerned with personality, family environment, work problems and disease processes.

Thirteen students and three faculty members were initiated into the Washington University School of Medicine chapter of Alpha Omega Alpha. Dr. Mildred Trotter, professor of anatomy; Dr. William Landau, professor of neurology, and Dr. Harvey Bernard, associate professor of surgery, were initiated as faculty members. Senior student initiates included Edward Berg, John Bigger, Judith Higgins Donegan, George Eagleton, John Ey, Nona Fulton, Robert Fulton, Wylie Hembree, Charlie Shaeffer, Hugh Tilson and Morris Wise. Richard Myers and Peter Schwartz of the junior class were also initiated.

Faculty Activities

Dr. Barbara Moss Herjanic, resident in psychiatry at Washington University, received the Alumni Recognition Award for service in the field of medicine at the 29th annual commencement of Kendall College in Evanston, Ill.

Dr. Axel N. Arneson has been named president-elect of the American College of Obstetricians and Gynecologists. Dr. Arneson is professor of clinical obstetrics and gynecology at Washington University.

Dr. William H. Olmsted, executive director of the St. Louis Diabetes Association and associate professor emeritus of clinical medicine at Washington University, received the Alumni Award of Merit from Coe College, Cedar Rapids, Iowa. Dr. Olmsted designed the unit which is used nationally for the early detection of diabetes.

Several Washington University School of Medicine physicians presented research findings and participated in discussions at the annual American Medical Association meeting held in San Francisco June 21 to 25.

Dr. Bernard Becker, head of the ophthalmology department, and Dr. W. Ross Morton spoke on phenylthiourea taste testing and glaucoma. Chorio-retinal vascular occlusions with latex spheres was discussed by Drs. Andrew J. Gay, Howard Golder and Morton Smith. Dr. Becker also discussed steroids in a symposium on complications and management with therapeutic agents in ophthalmology.

Drs. Jerome F. Levy, Harvey Bernard and William Monafo, department of surgery, presented their findings on canine cardiac homografts. Dr. Howard Nudelman presented "A Pathological Anatomy of Acute Pancreatitis: a Description of the Changes in the Very Early Stages." This is the result of Dr. Nudelman's work with Dr. Bernard and Dr. Bruce Munger.

In a symposium on autoimmune immunization, Dr. William Harrington, professor of medicine, discussed hematologic autoimmune illnesses. Dr. I. J. Flance and Dr. Franz Steinberg participated in a discussion dealing with the care of the chronically ill.

Dr. Robert Shank, head of the department of preventive medicine and public health, moderated a symposium on nutritional management of the patient and family. Dr. Shank also spoke on luxus and cardiovascular disease.

Alumni News

Dr. Ray Williams has been named president-elect of the Washington University Medical Alumni Association. Dr. H. Rommel Hildreth was elected vice president and Dr. Richard V. Bradley was reelected secretary-treasurer.

Dr. Heinz Haffner is president of the association for the coming year. Councilors from the St. Louis area are Dr. J. Neal Middelkamp, Dr. John R. Smith, Dr. Gerald Behrens and Dr. Hugh R. Waters. Councilors elected at large are Dr. Edgar Draper, Chicago; Dr. Jerome Levy, Little Rock, Ark.; Dr. Gerald Hanks, Palo Alto, Calif., and Dr. Sheldon Brownton, Flushing, N. Y.

ST. LOUIS UNIVERSITY

The appointment of Dr. Morton M. Weber as Director of the Department of Microbiology at the Saint Louis University School of Medicine has been announced by the Reverend Edward J. Drummond, S.J., Vice President for the Medical Center.

A native of New York, Dr. Weber received a Bachelor of Science degree from the College of the City of New York in 1949, and the Doctor of Science degree from the Johns Hopkins University Medical Institutions in 1953.

He did postdoctoral work in biochemistry at the McCollum-Pratt Institute of The Johns Hopkins University during the tenure of a fellowship from the American Cancer Society. During this time, he was also on the faculty in the Department of Microbiology at The Johns Hopkins School of Medicine.

In 1956, Dr. Weber joined the faculty at Harvard Medical School as instructor in the Department of Bacteriology and Immunology. He came to the Saint Louis University School of Medicine as assistant professor of microbiology in 1959. Dr. Weber was promoted to the rank of associate professor of microbiology in 1961, and to professor of microbiology in 1963.

His research is in the area of physiology and biochemistry of microorganisms, and he has published numerous papers in this field. One of his major contributions has been the discovery of the role of vitamin K as an intermediate in the terminal electron transport pathway in microorganisms. This biochemical pathway is the major one by which energy is produced in aerobic cells.

Dr. Weber is a member of the American Society of Biological Chemists, American Society for Microbiology, Society for General Microbiology of Great Britain, The American Association for the Advancement of Science, and the Society of the Sigma Xi.

He succeeds Dr. R. Walter Schlesinger who became Assistant Dean and Chairman of the Department of Microbiology at Rutgers University in January.

Announcement of a recent appointment of two Assistant Directors to the staff of Saint Louis University Hospitals has been made by John B. Warner Jr., Director. They are Joseph S. Kolodziej and Andrew J. Signorelli.

Mr. Kolodziej, who received his Bachelor's Degree from Washburn University, has been with the Hospitals for five years. During the last two years he has served as an Administrative Assistant.

Mr. Andrew J. Signorelli, a native St. Louisan, received his Bachelor's Degree from Saint Louis University. In 1963, he received his Master's Degree in Hospital Administration from Washington University. Mr. Signorelli served his administrative residency under Mr. Warner.

Expanded Research Facilities

A modern vivarium and added research facilities are under construction on the fifth floor of the St. Louis University School of Medicine.

The renovation and enlargement of the floor is scheduled for occupancy in November. When completed, it will provide a 25,000 gross square foot area for the vivarium and new research laboratories.

The project is supported by a grant of $350,000 received by the School of Medicine from the National Institutes of Health.

The north end of the new floor will house a centralized animal care facility serving all departments of the School of Medicine. An isolation area for experimental animals will be constructed.

New animal quarters will be under the direction of veterinarian Dr. Harry C. Eschenroder, who has joined the faculty as a research associate in surgery. He will supervise operation of the new vivarium and will work closely with the faculty's animal care committee headed by Dr. Vallee Willman, professor of surgery.

The Wohl Memorial Laboratory of Experimental Surgery was established on the fifth floor of the School in 1950. Studies on transplantation of the heart have been in progress in the laboratory for several years.

Additional research laboratories for cardiovascular surgery and cardiovascular research will occupy the south side of the modernized fifth floor. Research programs to be carried out in these laboratories will be directed by Dr. C. Rollins Hanlon, professor and Director of the Department of Surgery and Dr. Theodore Cooper, Director of the Center for Cardiovascular Research at St. Louis University.

Honors

Dr. Edward A. Doisy Sr., Director, Edward A. Doisy Department of Biochemistry, and Nobel Prize winner, was honored on the golden anniversary of his membership in the Society of Sigma Xi at the University Chapter's annual initation banquet. Dr. Doisy received engraved book-ends at a banquet at which the Very Rev. Paul C. Reinert, S.J., University president, and Rev. Edward J. Drummond, S.J., vice president of the Medical Center paid tribute to Dr. Doisy. Dr. Wendell H. Briffith, director, Life Sciences Research Office, Federation of American Soc-ieties for Experimental Biology, Washington, D. C., delivered a lecture entitled "The Promise of Scientific Research."

Dr. Alfred Richardson, professor of physiology, received an alumni achievement award from Southern Illinois University in June. He was honored at an alumni banquet held in conjunction with commencement excerises.

Fifteen graduating seniors at the St. Louis University School of Medicine were honored with awards at a senior banquet sponsored by the University's Medical Alumni Association in May.

Dr. G. O. Broun Sr., dean, St. Louis University School of Medicine, presented the awards after which Dr. R. Emmet Kelly, president, University's Medical Alumni Association, welcomed the graduates into the association and conferred alumni certificates.

Four seniors were winners for the most original research work submitted by senior medical students in the annual Beaumont competition. Stephan S. Morgan, 1358 McCutcheon Road, was the recipient of the $500 Borden award and a plaque for a research project entitled "Metabolism and Excretion of Radioactivity in the Bile Duct-Ligated Rat after Intracardial Administration of Deoxycholic 24-14 C Acid?"

In his research, under the direction of Dr. William H. Elliott, professor of biochemistry, Morgan attempted to answer the question, "Do jaundiced animals secrete or lose bile salts through the intestinal wall?" Investigators have attempted to answer this question for nearly a quarter of a century.

In the study, Morgan developed a new method of intracardial injection of extremely minute, accurately measured amounts of radioisotopes so that complete recovery could be ascertained. After injection into the heart, the radioisotopes were distributed throughout the body. In the samples from the injected rats, Morgan determined the excretory pathway of the labeled bile salts. His findings showed that less than 2 per cent of the radioactivity was secreted by the intestinal wall. In addition, he found a new metabolite which has not been identified. A similar study conducted in man might shed some light on the susceptibility of humans with disorders of the biliary tract to other diseases and might aid in determining how long one could live with blockage of the biliary system.

Joseph B. McNally, Prescott, Ariz., was the recipient of the second place Beaumont award of $250 for a study under the direction of Dr. Alfred Richardson, professor of physiology.

William B. Skaggs, Harrisburg, Ill., won a $100 Beaumont award for a paper entitled "Blood Coagulation and Time of Death." His study was directed by Dr. George A. Gantner Jr., associate professor of pathology.

Michael G. Murphy, Southgate, Mich. won a $100 Beaumont award for a paper entitled "Normal Anatomy of Cardiac Lymphatics."

Five seniors were recipients of outstanding performance awards in clinical studies. Louis E. Moix, Conway, Ark., was the recipient of the $100 bond presented by the Missouri State Medical Association; Paul F. Jurgensen, Savannah, Ga., was the winner of the Doctor G. O. Broun Sr. award in Internal Medicine; Robert C. Middendorf, South Ft. Mitchell, Ky. won the Department of Surgery award; Marvin A. Cook, Cleveland, Ohio, was the recipient of the Department of Pediatrics award presented by the St. Louis Pediatrics Society. John P. Conomy, Cleveland, Ohio, won the Doctor Francis M. Grogan award in psychiatry.

Mosby book awards presented for scholastic excellence went to: Eugene R. Adelmann, Webster Groves; John V. Cichon, East Detroit, Mich.; Gerald Fivian, Florissant; Ralph F. Principe, Kenosha, Wis., and John B. Wood Jr., San Francisco.

Sister Mary Ann Lou, Los Angeles, won the American Women's Medical Association award.

Visiting Professorship

Dr. Louis L. Tureen, professor of clinical neurology and psychiatry and chairman of the Section of Neurology at the St. Louis University School of Medicine, has been invited to spend one year as a visiting professor at the University of Gottingen in West Germany, where he will explore the problems of muscular dystrophy and multiple sclerosis. His guest professorship became effective August 1.

A $13,500 fellowship awarded by the National Institutes of Health will support his research studies there. His work will also be supported by a $2,000 grant awarded by the Teamsters Local 688, Labor Management Charitable Foundation Fund.

During his year's work at the University of Gottingen, he will be associated with Dr. Helmut J. Bauer, professor of neurology, and director of the department of neurology there. Dr. Bauer, an international figure in the field of neurochemistry, joined Dr. Tureen as a visiting scientist at the St. Louis University School of Medicine in 1961.

Dr. Tureen's principle investigations will be concerned with the identification of proteins in diseased muscle of chickens by immunological technics.

In his research, Dr. Tureen will make a comparative analysis of experimental and naturally occurring muscular dystrophy in chickens. Purpose of the experiment will be to use Vitamin E produced muscular dystrophy as a model for the study of the natural occurring muscular dystrophy in chickens.

Dr. Tureen will attempt to shed more light on the metabolism occurring in the hereditary disease in chickens, which is similar to the muscular dystrophy observed in children. Current scientific findings show that the hereditary type of muscular dystrophy seems to occur only in humans, chickens and mice.

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WASHINGTON

Republican Party Platform

The Republican party platform contained several provisions pertaining to health care issues. The following are excerpts from the platform:

The party pledges:

—tax credits and other methods of assistance to help needy senior citizens meet the costs of medical and hospital insurance;

—a strong, sound system of Social Security, with improved benefits to the people;

—continued federal support for a sound research program aimed at both the prevention and cure of diseases, and intensified efforts to secure prompt and effective application of the results of research. This will include emphasis on mental illness, drug addiction, alcoholism, cancer, heart disease and other diseases of increasing incidence;

—revision of the Social Security laws to allow higher earnings, without loss of benefits, by elderly people;

—full coverage of all medical and hospital costs for the needy elderly people, financed by general revenues through broader implementation of federal-state plans, rather than the compulsory Democratic scheme covering only a small percentage of such costs, for everyone regardless of need.

In addition, the platform states that the present Democratic administration has undermined the federally-assisted, state-operated medical and hospital assistance program, while using—and abusing—federal authority to force a compulsory hospital program upon the people and the Congress.

Health Care for the Aging

Though the House reported the social security bill does not contain any reference to health care for the aged, Senator Javits of New York has promised to attempt to add his version of the legislation to the House passed bill when it reaches the Senate. Mr. Javits is quoted as follows in the *Congressional Record* of July 8: "In spite of volumes of testimony on the urgent need to provide a federal program of health care insurance for the aging, Congress has thus far failed to take positive action on this issue. This problem will not go away by itself, and in the face of rising hospital and medical costs as well as sharp increases in nonprofit and commercial health plans, the plight of the retired citizen who seeks health care services is becoming increasingly grave. I deeply believe that we cannot put off action any longer on this essential program for persons 65 years of age and older, who are becoming an increasingly numerous sector of our population, and I am determined to take such action when the Social Security bill reported out of committee in the other House reaches the Senate."

NATIONAL CONGRESS ON MENTAL HEALTH

The Second National Congress on Mental Illness and Health, sponsored by the Council on Mental Health of the American Medical Association will be held in Chicago, November 5 to 7, 1964, at the Palmer House.

The theme of the Congress will be "Community Mental Health Services and Resources—Mobilization and Orientation."

The Council on Mental Health hopes that one tangible result of the Congress will be some positive guidelines on the role of organized medicine and the physician in private practice in various aspects of mental health programs. It is hoped that a large number of physicians, both psychiatrists and non-psychiatrists, will attend and participate in the Congress workshops.

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Admission to University of Missouri Medical School

As a referral center, the Missouri University Hospital admits patients only on the request of a practicing physician within the state. The referrals may be made, preferably, by the physician forwarding to the Admissions Department of the Medical Center the written application for admission of his patient, or he may phone that department to request the admission. Physicians are urged to contact the Medical Center before sending any patient, including emergencies, since on some occasions there may be not a bed available at the time.

If the patient is accepted by phone, the application form should be completed and should accompany the patient to the Medical Center. Pertinent medical information is thus immediately available to the attending physician and greatly facilitates the handling of the patient's particular problem.

On the application for admission a part of the information which is requested may be provided by the patient, or a responsible person. The referring physician is asked to complete the reverse side of the form, supplying a brief summary of the patient's previous record. Copies of these forms have been sent to all physicians in the state and additional copies are available from the Admissions Office on request.

When an application is received at the Medical Center, the patient may be admitted directly to the hospital, he may be given an appointment to an outpatient clinic or the application may be rejected. Whatever the decision, the referring physician is informed by letter or phone call from the physician who sees his patient. A list of the names of physicians in charge of each of the specialty fields is available upon request from the Admissions Department or the Dean's office.

To speed the handling of emergency requests, a special telephone switchboard has been set up in the Admissions Department and staffed so that the physicians calling may reach the individual who may be of the most service to him. When calling the Medical Center, it is helpful if the physician will ask for the Admissions Department and will indicate the service to which he wishes to refer his patient. It is well to give all pertinent data at the same time.

The patient's ability to pay in no way determines his admission to the University Hospital. In order to meet the costs of operation it is necessary for the Medical Center to earn approximately one and a half million dollars per year. For this reason, patients who can bear a part or all of the costs are asked to do so.

The philosophy and mechanics of the admission system is the result of a continuing effort to make the process as simple, as fast and as equitable as possible.

During the last year 9,619 patients were admitted to the Hospital, a 28 per cent increase over the figure for the previous 12 months. Requests for outpatient care have moved ahead at an accelerated pace, also, with 58,967 patients cared for in the outpatient clinics.

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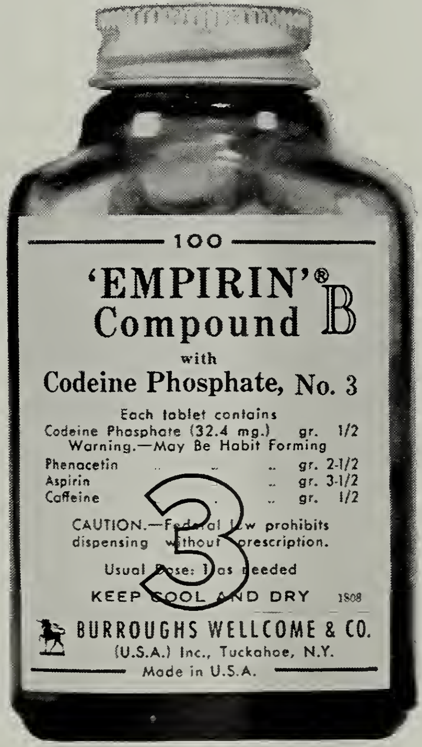
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C. G. STAUFFACHER, M.D., Secretary

Missouri Academy of General Practice

It is hoped that you have reserved the dates of Saturday and Sunday, October 31, November 1, 1964, to attend the 16th Annual Scientific Assembly of the Missouri Academy of General Practice, to be held at the Chase Hotel in St. Louis.

The program will include the following: Saturday, October 31, 9:00 a.m. to 10:00 a.m., Annual Business Meeting of the Academy. From 10:00 a.m. to 12:30 p.m., Symposium on Allergy. The speakers and subjects are: Haddon Carryer, M.D., Mayo Clinic, Rochester, Minn., "The Management of Status Asthmaticus," and "The Management of Hay Fever." Harry L. Alexander, M.D., Professor Emeritus of Clinical Medicine, Washington University Medical School, St. Louis, "Intrinsic Bronchial Asthma." Donald L. Thurston, M.D., Associate Professor of Pediatrics, Washington University Medical School, St. Louis, Mo., "Practical Approaches to Diagnosis and Therapy in Pediatric Allergy."

From 2:00 p.m. to 5:00 p.m., Symposium on Pediatrics. The speakers and subjects will be: Robert L. Brent, M.D., Professor of Pediatrics and Radiology, Director, Eleanor Roosevelt Cancer Research Institute, Jefferson Medical College of Philadelphia, Pa., "Respiratory Distress Syndrome in the Newborn Infant," and "The Effect of Maternal Environment on Normal and Abnormal Embryonic Development." Herbert J. Grossman, M.D., Director, Illinois State Pediatric Institute, Chicago, Ill., and Professor of Pediatrics, University of Illinois College of Medicine, "Diagnosis and Treatment of Convulsive Disorders," and "Recognition of Hidden Metabolic and Neurologic Defects of the Newborn Infant." C. Read Boles, M.D., Instructor in Clinical Pediatrics, Washington University Medical School, St. Louis, "Immunization: Newer Concepts." Carl Marienfeld, M.D., Professor and Chairman, Department of Community Health and Medical Practice and Medical Director of Crippled Children Service, University of Missouri Medical School, Columbia, Mo., "Recognition of Heart Disease in Children."

Sunday, November 1, 9:00 a.m. to 12:30 p.m., General Scientific Session. The speakers and subjects are: Leslie E. Rudolf, M.D., Associate Professor of Surgery, University of Virginia School of Medicine, Charlottesville, Va., "Organ and Tissue Homotransplantation," and "Deep and Superficial Thrombophlebitis." William H. Masters, M.D., Associate Professor of Clinical Obstetrics and Gynecology, Washington University Medical School, St. Louis, "Short Term Therapy in the Frigid Female." C. Thorpe Ray, M.D., Professor and Chairman, Department of Medicine, University of Missouri Medical School, Columbia, "Potassium Metabolism, Common Clinical Problems." C. Rollins Hanlon, M.D., Professor of Surgery and Director, Department of Surgery, St. Louis University School of Medicine, St. Louis, "Operable Hypertension." Henry M. Parrish, M.D., Associate Professor of Community Health, University of Missouri Medical School, Columbia, "Resurgence of Venereal Disease."

Better blood pressure response than with a thiazide alone

"A dramatic potentiating hypotensive effect with excellent reductions in pressure was noted when syrosingopine [Singoserp]...was combined with hydrochlorothiazide [Esidrix]."[1]

Lower thiazide dosage

"Hydrochlorothiazide [Esidrix] lowers the blood pressure, and its antihypertensive activity is potentiated by syrosingopine [Singoserp], allowing for a reduction of the dose of diuretic substance without a decrease in control of the disease."[2]

Less risk of rauwolfia side effects

"The combination of syrosingopine [Singoserp] and hydrochlorothiazide [Esidrix] not only has the hypotensive effects of reserpine and hydrochlorothiazide but has the added advantage of causing fewer side-effects."[3]

Indications: Mild to moderate hypertension, especially when complicated by edema.

Average Dosage: 1 Tablet #2 (syrosingopine 1 mg./hydrochlorothiazide 25 mg.) t.i.d. For patients requiring less syrosingopine, substitute Tablet #1 (syrosingopine 0.5 mg./hydrochlorothiazide 25 mg.).

Side Effects & Precautionary Measures

Singoserp (syrosingopine): Use cautiously in patients with peptic ulcer. Discontinue several weeks prior to surgery, if possible.

Occasional side effect: nasal congestion. Rare side effects: gastric irritation, drowsiness, fatigue, nausea, headache, emotional depression, skin rash, restlessness, anxiety.

Esidrix (hydrochlorothiazide): Watch for signs of fluid or electrolyte imbalance. Further electrolyte depletion may cause hypochloremic alkalosis and hypokalemia. Since the latter may precipitate digitalis intoxication, watch carefully patients taking digitalis or its glycosides.

Pay special attention to electrolyte balance of patients with severe renal or hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma. Contraindicated in patients with oliguria and complete renal shutdown.

Rare reactions: purpura with or without thrombocytopenia, skin rash, photosensitivity, urticaria. Thiazides may decrease glucose tolerance; use cautiously in diabetics. Hyperuricemia may occur but is readily reversed by a uricosuric agent.

Occasional side effects: nitrogen retention (in hypertensive patients), nausea, anorexia, headache, restlessness, constipation.

Supplied

Tablets #2 (white), each containing 1 mg. syrosingopine and 25 mg. hydrochlorothiazide; *Tablets #1* (white), each containing 0.5 mg. syrosingopine and 25 mg. hydrochlorothiazide.

References

1. Kolodny, A. L., and Dabolins, R.: Angiology *11*:180 (June) 1960.
2. Bare, W. W.: J. Amer. Geriat. Soc. *8*:795 (Oct.) 1960.
3. Lisan, P., and Balaban, S. A.: J. Amer. Geriat. Soc. *8*:803 (Oct.) 1960.

Singoserp®-Esidrix®
(syrosingopine and hydrochlorothiazide CIBA)

CIBA Summit, N.J.

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This article was written shortly before Mrs. Calkins' accidental death on August 7.

Woman's Auxiliary

San Francisco will always be a pleasant memory for me as I spent many hours with our vivacious Mildred Bohnsack and her wonderful husband, was in on Betty Sutter's election and installation as National President-elect and with much pride gave Jane Crispell's report on Missouri's best for the year. Our auxiliaries offered many services to their communities and with the continuation of these programs and new ones that are offered the health of all areas should improve and spread throughout our country and eventually to the rest of the world.

Mrs. Delevan Calkins

Legislation has been playing an important part in the lives of auxiliary women for the last few years and will continue to do so, for we find it more exciting and interesting when we are well informed, not only on national matters, but state problems. We realize that good government depends on each individual and that Congress is responsive to our opinions. According to our National Legislation Chairman, Mrs. Joseph A. Leonard, "Legislation is now synonymous with This Is Your Life and it is both our duty and privilege to be aware of pending legislation and support it when it will benefit the people and/or to oppose passage when it is not in the best interests of the nation." Let us try to read and keep up with bills being proposed on air and water pollution, control of dangerous drugs, pesticide and radiation control, better mental health ideas, voluntary or compulsory social security for doctors.

Your help will be needed in putting over a new idea—A Precinct Action Course (PAC) completely bipartisan consisting of a four session course to be used by groups of four to 12. It is a great way to be effective in politics not only this election year, but in the years ahead. Do not delay to get started—contact your state political action committee now. Heed the clever saying at convention, "it is true we do not want doctors and their wives mixed up in politics, we think they should know what they are doing."

AMA-ERF which started in 1951 is a program which needs our continued support as the Medical Education Loan Guarantee Program has found that almost one of every nine medical students in this country has borrowed money under this setup and the funds for medical schools gives the deans a chance to use the money as they deem best. If you saw the June issue of Missouri Medicine, I hope you did not miss the page Across Missouri with the picture of Dr. Leonard T. Furlow presenting checks to the Deans of our three medical schools. The checks totaled $35,000.00 and it is good to see that the hard work put in on fund raising projects for AMA-ERF is so worthwhile. Let's try to increase our goals this year—remember if each member used one Memory Card and an Appreciation Card during the year we could easily raise our quota. Tennessee averaged $11.75 per member.

We will renew our efforts for new members by trying to reach the young and new doctors' wives in our areas before other clubs find them, try to entice former members back and interest the doctor's wife who has never been willing to join by our enthusiasm for the auxiliary and its aims. National's slogan is "Join Hands—Close the Gap."

Just as Health Careers Recruitment made such an impact and became one of our best projects, so also has IHA (International Health Activities) caught fire—the response has been so gratifying and requests continue to come from around the world for used medical journals (Doctor-to-Doctor Program), used medical textbooks (not more than four years old), instruments and other equipment in good condition, bandages and drugs. Thank you letters have poured in from doctors, missionaries and others. This is a project that M-A-L could do getting clubs and churches to help with packing and shipping charges. IHA is one of the best ways to stress, "Better Health—Better World" for it is truly a Worldwide Service Program.

Due to conflicting dates at the Muehlebach Hotel, St. Louis will be hostess at the Chase Hotel for the 1965 Annual meeting. The dates are the same, April 4 to 7, and we promise our guests nicer weather than this year.

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Recurrent Subdural Effusions in Infants

Possible Causes and Treatment

Clinical observations upon occasional infants with subdural effusions which persist after surgery are presented, some of which are commonly seen and some which appear uncommon. Two case histories are presented in detail from among six such infants since they appear to be representative of the findings and problems common to these patients. The possible physiologic significance of these observations is discussed.

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Large subdural fluid collections which tend to re-accumulate despite repeated subdural tapping, and repeated craniotomy with membrane removal are seen in the occasional infant and may confront the neurosurgeon with a trying therapeutic problem. Elucidation of the reasons for the recurrence and the persistence of these fluid accumulations is therefore highly desirable.

Five infants with persistent recurrent subdural effusions were encountered among 27 infants whom I operated on for subdural hematoma at the Cardinal Glennon Memorial Hospital since 1956. Case histories of two of the group of five are presented in detail as representative of the findings and problems present. General clinical observations on infants with subdural hematomata are presented, of which many have been noted by other observers.[4, 6, 11] A critical analysis of these observations is ventured, and certain conclusions concerning the mechanisms of subdural fluid re-accumulations are offered.

Case Histories

Case 1. An 18 month old male was hospitalized with H. influenza meningitis, with a head circumference of 51 centimeters. Twelve subdural aspirations were performed in the first three weeks, averaging 35 cc. with no abating of the fluid. Following subdural air insufflation, a left temporal trephine was made and 225 cc. of bloody yellow fluid was removed, leaving a subdural space 2.5 centimeters in depth. The brain was partially re-expanded with intraspinal instillations of 160 cc. of warm saline solution without complications. Membranes were biopsied.

Three days later, 65 cc. of yellow fluid was aspirated from the left subdural space. Attempts to re-expand the brain by further intraspinal saline solution were impossible due to the resistance of the patient. From 60 to 110 cc. was removed subdurally on six occasions, with no abatement of fluid accumulation.

Left craniotomy was performed six weeks after entry. After 225 cc. golden yellow fluid was removed, the brain was still separated 2 centimeters from the skull. The dense inner membrane was stripped off, and the brain re-expanded partially after 140 cc. of saline solution was given intraspinally.

A subgaleal fluid sac developed postoperatively, due to subdural fluid escaping through the dural incision. One hundred and forty cc. reddish fluid was aspirated from the subgaleal space 10 days after the craniotomy. Pressure dressings for one week merely aggravated the bulging subgaleal fluid accumulation, despite removal of from 85 to 150 cc. on five occasions in these seven days. Pressure dressings were discontinued and the bulging scalp then became soft and small in size for 19 days, when it bulged again following a cold. At this time 250 cc. of pale yellow subgaleal fluid was aspirated, causing a slight tremor of both ankles briefly. However, the subgaleal fluid had re-accumulated within four hours, judging from the bulging of the scalp flap. Eleven more subgaleal aspirations averaging 170 cc. were made in the next three weeks, with no abatement of fluid accumulation. Another 48 hour trial of pressure dressings with foam rubber was made during this time, but an unequivocal speed-up in fluid accumulation resulted promptly.

Accordingly, a Torkildsen type subdural-posterior cistern shunt was made three and one half months after admission. A pressure dressing for 48 hours caused rapid re-accumulation of the subgaleal fluid despite the shunt. Pressure dressings were withheld, and the subgaleal fluid bulge abated and was minimal for several days in spite of a cold and no subgaleal fluid aspiration was necessary in the next three weeks except 160 cc. and 80 cc. after two intra-ventricular saline solution instillations of 55 cc. each. More than this amount caused vomiting. The patency of the shunt tube was confirmed by saline instillation and aspiration in both directions in the tube. The subgaleal fluid was markedly reduced and required only occasional aspiration until the child contracted chickenpox. During and after this febrile illness, subgaleal aspirations of 160 cc. each were necessary every two days for six occasions. It was evident that a passive shunt was ineffective.

On May 10, 1962, nearly five months after admission, a Heyer Pudenz valve was installed, using the subdural-posterior cistern shunt tube already in place. Subgaleal fluid re-accumulated unabated, and required frequent aspiration of large amounts of fluid until pumping was begun regularly three weeks postoperatively. Pumping was withheld to permit firm healing of the scalp over the valve. Once the valve was pumped regularly, daily, the subgaleal accumulation disappeared.

He left the hospital six months after admission doing well except for slight nystagmus and slight favoring of the right leg in walking. Head circumference was 51.9 centimeters as compared to 51 centimeters when admitted. Last reports more than 18 months after discharge indicated that the child was completely well with the valve requiring no pumping.

Case 2. A 5 weeks old female infant was admitted on June 19, 1962, having left sided seizures and vomiting after a blow to the head by a sibling. No post-ictal paralysis was noted, but the anterior fontanelle was tense, with a head circumference of 35 centimeters.

Only 2 cc. of grossly bloody subdural fluid on the left side was obtained the first day and none on repeated taps. She seemed well except for a slight increase in head size, until August 13, 1962, when seizures recurred with a rapid increase in head size.

After 12 aspirations of from 30 to 50 cc. of subdural fluid on the right side, neurosurgical consultation was followed by a right parietal craniotomy on August 28, 1962. More than 100 cc. of yellow fluid was evacuated from the subdural space as well as a tenuous inner membrane. A small area of slightly calcified yellowed cortex was noted in the parietal area.

Subdural fluid re-accumulated rapidly, requiring aspiration of 75 cc. orange fluid six days after surgery. Ten additional subdural aspirations averaging 90 cc. of yellow fluid were made in the following six weeks. Intraventricular instillation of 25 to 40 cc. of warm saline solution to expand the brain was done on four occasions during this period but a severe rhinitis with fever made further instillations unwise. Rhinitis persisted throughout the stay, requiring antibiotics periodically. Hematocrit levels and nutrition were excellent through the postoperative period. With exacerbation of the recurrent rhinitis, with otitis and persisting fever, the subdural fluid accumulated rapidly with head circumference increasing to 47.5 centimeters. Eight subdural fluid aspirations averaging 87 cc. were needed every one to two days before the rate of accumulation subsided with recovery from the otitis.

Re-accumulation appeared to have ceased by November 9, 1962, since the head did not enlarge further. She seemed well clinically, with a soft fontanelle, and only 4 cc. of fluid obtainable over the next three weeks.

Subdural fluid reformed after this, and after aspiration of 65 cc. of yellow fluid, five days apart, a shunting procedure was performed on December 10, 1962, after it was ascertained that no infection existed in the subdural space. A right subdural-left ventricle shunt was performed using a Holter valve assembly placed transversely across the midline between posterior parietal trephines. She returned home with a soft fontanelle, and a head circumference of 45.5 centimeters, and with the valve working well, and no further aspiration needed. No re-accumulation was present nine months later, and no neurologic deficit existed. Pumping of the valve was necessary only for the first six weeks.

Clinical Observations

The following observations made on these infants, when examined in proper perspective, appear basic to any speculations as to the mechanisms of recurrence of these effusions, since in the majority of infants with subdural effusions, simple subdural aspirations, trephines with evacuation of subdural fluid or a simple craniotomy will effect a cure.[9, 12] In occasional infants, repeated craniotomy, two or more times, with removal of membranes will not eliminate the subdural effusions.

Skull-brain Volume Discrepancy

Most infants with subdural effusions persisting despite craniotomy will have a considerable discrepancy between the volume of the skull and the volume of the brain underlying the effusions. This skull-brain volume discrepancy can be reduced markedly under direct vision by intraspinal instillation of warm saline solution carefully and slowly in amounts even up to 160 cc. at one instillation with safety in these infants. Daily intraspinal saline instillations for two weeks or more can be given without ill effects if the patient is cooperative. On the other hand, daily spinal tap with saline instillation is an impossibility in the obstreperous infant.

When the skull-brain volume discrepancy is marked, the bridging veins to the various sinuses and dural surfaces are observed at time of operation to be under considerable stretch and tension. These tear readily if placed on sudden stretch accidentally, and different bridging veins will be on stretch according to the part of the brain uppermost at the time. Drastic, near fatal changes in the vital signs and function of the medullary centers can occur suddenly with mere changes in position of the head during the postoperative period.

Subdural Membrane Histology

The histology of the outer membrane[13] revealed the usual fibrous sheet of cells with large new capillaries between the dura and the outer membrane when attached to each other before stripping. The histology of the inner membrane[13] usually shows only the typical fibrous stroma without much vascularity.

Subdural Hematoma Membranes—Removal and Reforming

Removal of the inner membrane, when dense, permits the brain to expand[4, 11, 12, 14] and convolutions assume their normal rounded full shape. The arteries and capillaries of the brain surface become more prominent, resembling the injection of the slightly inflamed sclera. The inner membrane is usually completely avascular and strips off easily and bloodlessly from the surface of the brain. The subarachnoid spaces and sulci then exposed are noted to have clear colorless fluid in them.

Removal of the outer membrane is often quite vascular because it is tightly adherent to the dural surface, and leaves myriad bleeding points on the raw dural surface after it is stripped from the latter.

Removal of the inner membrane alone, or together with the outer membrane, does not prevent the prompt re-accumulation of subdural effusions, when skull-brain volume discrepancy is large.

Membranes reform readily in two weeks or less, after their removal at operation, despite subdural aspirations initiated immediately after surgery. These membranes are often present in reformed state at the time of final successful absorption of the residual subdural fluid.

The inner membrane sometimes does not reform after craniotomy and removal of the membranes, as noted in one infant treated with enzymes.[8]

The absence of an inner membrane at any time is the usual finding in adults, interestingly. Also, in adults it is common knowledge that the subdural fluid loculation persists particularly in those more elderly patients in whom the brain does not re-expand to fill the skull cavity.

Permeability of the Arachnoid Membrane

An extremely interesting phenomenon has been personally observed repeatedly at operation wherein beads of clear cerebrospinal fluid are seen passing through the arachnoid, from the subarachnoid space into the subdural space. This has been noted only in the subdural hematoma patient to date. It has been observed in the adult patient as well. The beads can be observed to form and enlarge on the arachnoid surface as one lightly blots the arachnoid membrane.

Subdural Fluid Recurrence

Yellow subdural fluid re-accumulates within two or three days and sooner after complete evacuation of a subdural effusion in infants despite wide removal of inner and outer membranes, even when no fresh bleeding is evident on analyzing the fluid, and well before membranes can reform. Upper respiratory or other febrile illnesses appear to increase the amount of subdural fluid present in these infants. Increased fluid production with febrile illness is also seen in hydrocephalic infants.

Protein Content of the Subdural Fluid

This yellow subdural fluid has a high protein content, even though re-accumulation has been rapid and evidence of fresh bleeding absent or minimal.

This protein level may actually increase on consecutive taps, despite no fresh bleeding, and the volume of the fluid present subdurally may also increase[6] despite taps.

Large amounts of protein are removed by daily or frequent subdural taps, and this tends to produce a negative nitrogen balance in these patients who do not improve. The subdural fluid present after a week or two in the chronic cases is clear yellow to pale lemon in color with a few red blood cells.

Scalp Vein Prominence

Prominence of the scalp veins disappears, once a subdural effusion is reduced or absorbed. Though usually not as marked as in infants with uncorrected hydrocephalus, the veins of the scalp are more prominent than normal in infants with subdural effusions, especially if the anterior fontanelle is tense. The scalp veins appear more prominent as the intracranial pressure is higher. With repeated testing and observation, the flow of blood in these enlarged scalp veins is always away from the head toward the face and base of the skull. It is of interest that pressure dressings on the skull appear to aggravate the prominence of these scalp veins, logically. Of further interest, the application of pressure dressings for absorption of cephalohematomata merely aggravates them, with ready absorption if left alone without tapping. The same response occurs with subgaleal fluid accumulation from a subdural fluid accumulation when pressure dressings are applied.

Spontaneous Absorption of Subdural Fluid

Spontaneous absorption of subdural fluid occurs, often of large amounts even without craniotomy. With these patients, repeated subdural taps get rid of most of the fluid, then the residual fluid disappears spontaneously and the child gets well. Likewise, with subdural fluid remaining after craniotomy or trephine, after the fluid is aspirated several times, the residual fluid often tends to resorb. The same process occasionally occurs in infants after repeated craniotomy and with considerable skull-brain size discrepancy.

Again, in some infants with subdural effusions which are present in small amounts, of 10 to 25 cc. or so, the fluid will often be absorbed in a few days if subdural taps are deferred and tend to persist if tapping is continued unduly.

A critical point is noted repeatedly in the recovery of these infants. Once a child gets ahead in his treatment he often will improve or "roll along" on his own with only an occasional tap necessary, or no further taps at all.

Discussion

1. *Basis of Failure of Re-expansion of the Brain.*—The basis of the failure of re-expansion[3] of the brain after removal of a subdural hematoma is not clear. When the restraint of the inner membrane has been removed surgically, the brain may fail to re-expand, and the skull cannot remold sufficiently for re-approximation of the skull and brain. The mechanism responsible seems partly mechanical in nature since artificial re-expansion of the brain results in such a remarkable clinical improvement in the adult patient as so well demonstrated by Gardner[7] and others[3, 18] and repeatedly confirmed by my experience. Application of the same treatment of artificial re-expansion of the brain in infants[6] seems desirable for when eventual recovery occurs the brain and skull are approximated.

2. *Source of the Yellow Fluid.*—The source of the persistent xanthochromic, high protein fluid in the subdural hematoma has remained an enigma. That this high protein fluid is not due to breakdown of red blood cells from new hemorrhage[13] has been confirmed repeatedly by this observer and others.[6, 18, 20]

The bridging veins from the cortex to the dural sinuses which may traverse a subdural hematoma may of course be the source[6] of subdural hemorrhage initially, but for the production of high protein yellow fluid relatively rapidly, these veins cannot play too large a role, since the total surface area of these vessels is relatively small.

This yellow subdural fluid must originate from the structures bounding the hematoma and this high-protein, yellow fluid must enter the subdural space across the inner or outer membranes of the subdural hematoma, or both, unquestionably.

No high-protein yellow fluid can be expected to cross the thin inner membrane overlying the pia-arachnoid since this membrane[10, 13] is transparent, loosely attached to the pia-arachnoid, is avascular, and strips easily from the pia-arachnoid surface with no gross or microscopic evidence of vascular attachments or connecting structure usually. Moreover, the fluid bathing the cortical vessels in the subarachnoid space is usually clear and colorless cerebrospinal fluid, and not a likely source of the yellow high-protein fluid enclosed in the hematoma membranes.

The outer membrane[10, 13] on the other hand presents an abundance of new vessels and capillaries, which can be observed oozing vigorously on the raw inner surface of the dura lining the skull, from which the adherent and vascular outer membrane of the hematoma has been stripped. Here is the ideal surface with newly-formed fine vessels presenting an excellent extensive source for rapid exudation of high protein fluid across the outer membrane, without fresh bleeding. This would support those favoring blood plasma as the source of the fluid re-accumulating.[6, 20]

3. *Factors in Production of High Protein Fluid.* —The circumstances under which such a vascular membrane will exude high protein fluid appear to be those present when venous drainage from the brain and skull is impaired, causing stasis and hypoxia.

Gross evidence that venous drainage from the brain and skull is impaired is manifest by the marked prominence of the scalp veins. The same finding and vascular adjustments probably occur in hydrocephalus. These prominent scalp veins disappear promptly after successful surgical treatment of the subdural hematoma when normal venous drainage and flow is re-established apparently. They also enlarge promptly when subdural fluid re-accumulates rapidly and the anterior fontanelle becomes tense. Subdural aspiration of this fluid will result in a marked decrease in prominence of these vessels, which continues until fluid pressure builds up again.

Scalp vein enlargement is not due to obstruction of flow in these veins since flow is away from the head and toward the neck in these prominent veins, and obstruction would have to be postulated in the neck veins or heart. The enlargement of these scalp veins is due to increased blood diversion to the superior longitudinal sinus and connecting veins with increased collateral circulation via these vessels because the normal venous drainage channels inside the skull are obstructed, probably only partially. These normal channels are the vein of Galen and basal veins which tend to be obstructed at their entry into the straight sinus by traction, distortion and pressure from the subdural fluid accumulations, and from acute skull enlargement.

The distortion and stretch of the Galenic veins is understandable in view of the fixed position of the straight sinus origin at the anterior edge of the tentorium at the point where the vein of Galen drains into it. As the skull enlarges acutely with an increase in all the diameters and circumference, the fixed dural sinuses and entering Galenic veins are stretched and displaced with the expanding skull. Additional distortion and stretch of these vessels must occur in the presence of a large unilateral subdural fluid accumulation pushing the brain downward and to one side.

Postmortem examinations on hydrocephalic infants tends to bear out the probability of stretch of the Galenic veins in the presence of an enlarged skull, and brain distortion simultaneously by intraventricular or subdural fluid collections. At postmortem examination, the vein of Galen was straightened, with no evidence of slackness or tortuosity or bending as described in anatomical texts.[17] The degree of tension or stretch upon these Galenic vessels could not be reliably determined in the postmortem state.

Back pressure into the basal veins of the brain and the internal cerebral veins results, and venous drainage then proceeds in greater volume through the facial veins, emissary veins and veins draining head and face which also have intimate connections with the superior longitudinal sinus, resulting in enlargement of these scalp and face veins which are often so prominent on clinical examination. Engorgement and dilation of collateral veins without ventricular enlargement have been demonstrated experimentally also.[1, 2]

Some slight impediment to venous drainage of the brain due to stretching of the bridging veins to the superior sagittal sinus must occur, but is necessarily relatively small compared to the resistance present in the vein of Galen and tributaries, entering the straight sinus at the tentorial notch area.

4. *High Protein Level of Subdural Fluid.*— The high protein level of the subdural fluid gives the latter a high osmotic value relative to the cerebrospinal fluid in the subarachnoid space beneath the inner membrane and arachnoid, and one would expect water to be drawn into the subdural space from the subarachnoid space, causing dilution of the subdural fluid. Gardner[7] after experimental study using semipermeable membranes, postulated that the subdural hematoma membranes, inner and outer, act as semipermeable membranes and draw fluid into the subdural hematoma sac by osmosis, due to the high protein content of the subdural fluid. This should result in dilution of the subdural fluid concentration. This does not occur, in fact the protein level usually remains high, or even increased, without fresh bleeding. If blood in the vessels of the outer membranes is the source of the high protein in the subdural fluid, concentration could occur. The subdural accumulation of a consistently high protein fluid makes

leakage from abnormal vessels in the outer membrane the most likely source of such protein.

The simultaneous passage of water from the subarachnoid pathways by osmosis, or by direct seepage of clear fluid as observed at operation, may also occur but is probably of minimal significance. This diluting effect would be masked by the high protein accumulating in the subdural fluid from the blood vessels in the outer membrane. However, such seepage of clear fluid from the subarachnoid pathways may be important in formation of so-called subdural hygromata.

5. *Excess Protein Loss With Repeated Taps.*—Excessive protein loss occurs with repeated subdural puncture and evacuation of the rapidly reforming xanthochromic fluid. Poor nutrition as a result of poor feeding and vomiting, and previous blood loss and anemia add further to the protein depletion, resulting in increased permeability of the abnormal vessels described in the outer membrane. Attention to these factors is also necessary, if the mechanical removal of the subdural fluid and efforts at decreasing skull-brain size discrepancy are to be effective. Nevertheless, a direct relationship of the level of hemoglobin and the hematocrit and nutritional state were not demonstrable readily, since subdural fluid will persist often despite excellent nutrition and hematocrit levels.

6. *Drastic Changes With Position.*—The drastic near-fatal changes in vital signs that occur occasionally with changes in the position of the head in these infants is due to the excessive traction and stretching of the bridging veins and the arteries supplying the brain, following surgical evacuation of a large subdural effusion. Similar effects on the Galenic veins as described are probably also responsible. This excessive stretching is most marked where the discrepancy in brain and skull volume is excessive. These severe cardio-respiratory changes are promptly corrected by a change of the head position. Instillation of saline solution into the subdural space postoperatively[9] tends to lessen these effects and is commonly done, although one fears that the brain may be prevented from re-expanding in the larger effusions. Internal re-expansion of the brain by intraspinal or intraventricular saline solution seems more logical, as it tends to obliterate the dead space often left when the subdural effusions are evacuated.

7. *Mechanical Correction of Impaired Venous Drainage.*—The postulated obstruction of the venous drainage into the straight sinus and lateral sinuses by distortion and stretching of the entering veins should be readily correctible by any measures which result in the re-expansion of the compressed unexpanded brain which remains after a subdural effusion has been removed.

Instillation of normal saline intraspinally may help in some instances, if feasible, at operation and repeatedly postoperatively. The brain is seen to rise upon the instilled subarachnoid fluid cushion at operation, with re-expansion of the ventricles and approximation of the brain surface to the inner surface of the skull. The compressed, stretched or kinked draining vessels entering the straight sinus should now tend to assume their normal position and normal drainage pattern.

Unfortunately, frequently repeated lumbar puncture and intraspinal fluid instillation is difficult to evaluate and impossible in most of these children due to their inability to cooperate. The risk of infection is also enhanced. Nevertheless, it appeared to be life-saving in one infant.

Intraventricular taps are more feasible in infants. However, the risk of brain trauma and the risk of intraventricular irritation and infection limits prolonged or frequent use of the intraventricular route of saline instillation in a given patient. Intraventricular and intraspinal instillation of protein such as albumin or gelatin[16] may prove worthwhile, but would appear to carry considerable risk.

Mechanical shunts to remove or direct the subdural fluid to other fluid reservoirs such as the blood stream or subarachnoid pathways also correct the mechanical distortion by removing the offending volume of subdural fluid accumulation and allowing the brain to re-expand. Of the shunts the Torkildsen ventricular-cisternal shunt[5, 14] appears logical in principle and has been successful. However, clinically no significant pressure differential appears to exist in a closed skull compartment for flow of fluid from subdural to subarachnoid space once the excessive pressure of a large subdural accumulation has been dissipated by the shunt. The remaining subdural fluid may not tend to flow through the shunt actively once the pressure head is lowered appreciably. Subdural fluid accumulation remained in considerable amount in one infant despite a patent Torkildsen shunt.

A force flow type of shunt from the subdural space to the subarachnoid space or the blood stream seems necessary, and is neatly provided by the Spitz-Holter or Heyer-Pudenz valves. More prompt use of these shunts for persistent sizeable subdural fluid accumulations seems to be the most logical approach rather than the multiple taps and multiple operations sometimes used. The simplest shunt would appear to be a direct subdural-ventricular loop, with a valve placed between two adjacent trephines, thus sparing the posterior fossa exposure and sparing the venous system which are used in other shunts. At the same time the ventricles and the brain would tend to be actively expanded, which appears to be the ultimate goal. This shunt was promptly successful in one infant.

8. *Removal of the Hematoma Membranes.*—Removal of the outer membrane does not appear necessary or effective when performed in these patients. This has been the experience of others.[11, 15] Improvement occurs without its removal just as in the adult. When this membrane has been removed, oozing blood vessels are unnecessarily exposed, sometimes causing needless blood loss and prolongation of the operative time. When the subdural effusion persists despite craniotomy, at re-exploration, one may see the outer membrane reformed in two weeks or less after its removal.

Craniotomy for removal of the inner membrane has been performed only if the latter seems thick enough to constrict the brain[4, 11, 15] at the time of trephine exploration, or if multilocular subdural accumulations due to membranous septa are present. Removal of the inner membrane does not appear necessary or effective in preventing subdural fluid re-accumulation since the latter occurs even after the inner membrane is removed permanently, as confirmed in one infant by a second craniotomy.

9. *Spontaneous Absorption of Subdural Fluid.*—Spontaneous absorption of subdural fluid and rapid improvement is often seen, as after a curative craniotomy, trephination or subdural aspiration. In all these situations residual fluid is invariably present, but is spontaneously absorbed. The site of such absorption would, for reasons previously described, appear to be the well vascularized outer membrane. The reversal of transport of high protein subdural fluid must necessarily be the result of restoration of normal venous drainage pathways, and relief from brain compression and distortion by subdural fluid accumulation, and correction of nutritional factors. With this reversal of transport of fluid and protein across the outer membrane there will result a rapid spontaneous improvement even with chronic persistent subdural hematomata as in the several infants observed. This indicates that a critical point exists in the correction of the main factors present, namely, impaired venous drainage, excessive brain compression, distortion, and failure of re-expansion, hypoxia, impaired nutrition and excessive protein loss.

The role of the inner membrane in spontaneous absorption of subdural fluid would seem to be minimal, at least on the basis of osmotic relationships. Absorption of material from the normal subdural space into the longitudinal sinus has been demonstrated also,[19] but probably plays no significant part in spontaneous absorption of subdural fluid accumulations.

Conclusion

The cause of persisting subdural fluid accumulation in infants despite craniotomy and repeated subdural tapping appears to be due to active transport of fluid and protein across the outer subdural hematoma membrane via the numerous abnormal vessels present here on gross and microscopic study.

Factors affecting these abnormal new vessels in the outer membrane, such as impaired venous drainage of the brain, enlargement and engorgement of the superior longitudinal sinus with collateral enlargement of scalp and face veins, cerebral hypoxia, poor general nutrition and excessive protein depletion, all tend to favor reaccumulation of the subdural effusion from these abnormal vessels despite repeated taps and craniotomy.

Correction of these same factors favors absorption of residual subdural fluid through these same abnormal vessels which will have no function once absorption is complete, and resistance and back pressure into them from the responsible draining sinus is corrected.

The mechanical re-expansion of the brain seems to be the most important goal in the correction of the impaired venous drainage present, judging from the improvement seen after measures directed toward re-expansion of the depressed brain by intraspinal or intraventricular saline instillation; or by producing a negative subdural pressure by action of a mechanical pump-valve shunt.

Prolonged and expensive morbidity can be reduced significantly by utilizing the shunt within a week or two after craniotomy if appreciable subdural fluid persists. The subdural-ventricle shunt seems most logical and least traumatic, where feasible.

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FREDERICK C. COLLER, M.D., ***Springfield***

Pneumocystis Carinii Pneumonitis

Two cases of siblings are reported, both of whom expired from pneumonitis. The cause of the pneumonitis was Pneumocystis carinii. The clinical, pathologic and radiologic findings are presented.

INTERSTITIAL pneumonitis caused by Pneumocystis carinii has been reported for the first time in the medical literature in America.[1] It has been reported in both infants and adults. In the latter, the disease is associated with long-standing chronic debilitating diseases. Since that time the disease has been labeled as interstitial plasma cell pneumonia. Long-standing diseases, such as malignancies or prolonged steroid therapy as well as epidemics occurring in institutions among the aged, have been thought to be responsible for this type of pneumonitis.

The purpose of this paper is to present a series of two cases occurring in siblings, six and one-half years apart. The radiologic findings of the first case report are also presented with some of the pertinent findings.

REPORTS

The patient was a 6 month old white male whose first hospitalization was two months prior to his death. At that time he had complaints of severe paroxysms of coughing, cyanosis and dyspnea. There was no fever. At that time he had a white blood count of 30,000 with 30 per cent eosinophils.

On his present admission he had an elevated white count of 23,000 and clinically showed signs of a progressive intractable pulmonary insufficiency. His temperature varied up to 101 F. and his pulse rate to 100 per minute. Extreme dyspnea and cyanosis were evident. Sputum culture grew out gram positive cocci compatible with Pneumococcus as well as a beta hemolytic Streptococcus. Monilia was also present. No other organisms were isolated. He expired five days after admission. Chest x-rays show graphically the progressive consolidation (fig. 1 A, B, C, D).

At autopsy the only findings of note were limited to his lungs. The left lung weighed 105 grams (42 grams normal) and the right lung weighed 155 grams (39 grams normal). Both lungs were similar. There were small petechiae of an anoxic type present on the pinkish-tan pleural surfaces. The lungs were quite firm and consolidated throughout all five lobes. Sections of lungs taken at random sank in water. Sectioning of the pulmonary tissue revealed a pale tan cut surface with a lobular, greyish-tan appearance. The bronchial and vascular trees were grossly not remarkable. Microscopically both lungs showed all of the alveolar lumens to be filled with a lace-like eosinophilic material which for the most part was acellular (fig. 2). A silver methenamine stain revealed these areas to be filled with fungus-like or protozoa-like organisms approximately 5 microns in diameter with an irregular oval outline (fig. 3). Occasionally one could see up to two endospores present within the nucleus (fig. 4). These bodies were quite indistinct on H-E stain. Many of the alveolar walls contained a pink hyaline membrane partially lining them. There was a slight degree of edema of the alveolar septae with minimal infiltration by monocytes, lymphocytes, plasma cells and occasionally eosinophils. Scattered throughout the lungs and choking the small capillary lumens were large irregular, deeply basophilic megakaryocytes. Cultures from the bronchus revealed pure cultures of Pseudomonas aeruginosa. A fungus culture of the lungs revealed the presence of spores or yeast-like bodies. The lumens of the bronchi showed the same content. The vascular tree was not remarkable. The organisms were typical of Pneumocystis carinii.

Six and one-half years prior to this, another sibling, a 16 month old brother, had been sick for three days. He had rapid respirations, a slight degree of cyanosis with little cough. Physical examination was normal except for rapid respirations and a few basal rales. No consolidation was noted. The heart tones were normal. The temperature was elevated to 99.6 F. The white blood count was 11,000 with hemoglobin of 69 per cent. An x-ray on admission to the hospital showed pulmonary edema. The infant was placed in oxygen which caused an abatement of his cyanosis. Respirations became elevated to 80 per minute the first night and the patient was placed on antibiotics. There was no previous history of allergy or exposure to poisonous dust. The eosinophil count on differential on admission was 45 per cent. The clinical impression on admission was pulmonary edema. This became progressively intractable and in spite of therapy he expired after 10 days in the hospital.

At autopsy the only findings of note were in the lungs which were grossly described as the same type as found in the present case. The right lung weighed 230 grams (72 grams normal) and the left lung 250 grams (64 grams normal). The pleural surfaces were smooth and glistening. Both lungs were consolidated and devoid of air. On sectioning, the cut surfaces were firm and rubbery and no crepitation was elicited on palpation. The bronchi contained fairly prominent amounts of frothy thin mucous material but the bronchial tree showed no evidence of

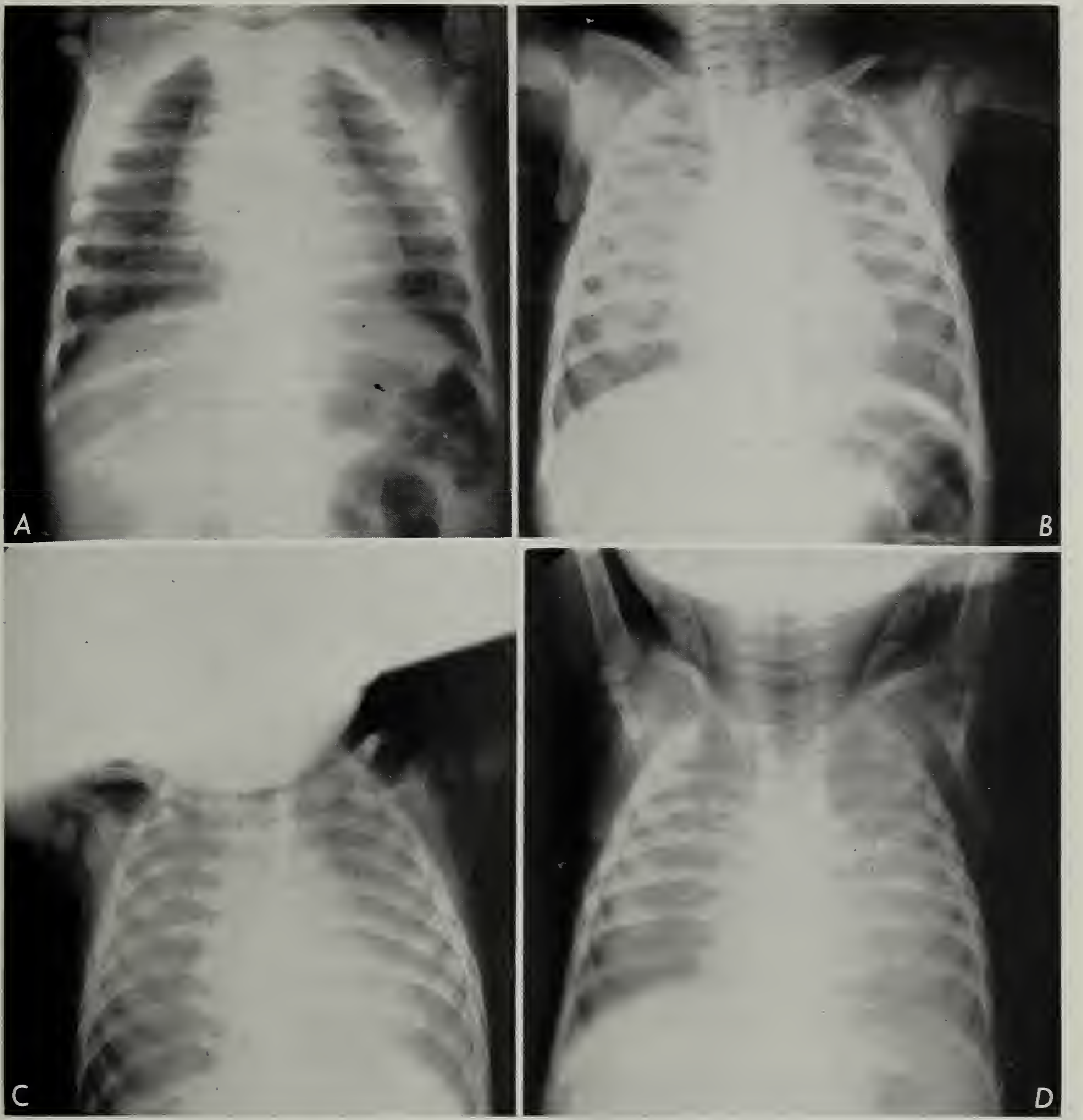

Fig. 1. A. A normal chest x-ray taken two months prior to death. B. A chest x-ray 10 days prior to death, moderately advanced diffuse consolidation. C. X-ray of chest five days prior to death showing uniform dense involvement of almost all pulmonary tissue. D. The appearance of the chest two days before death demonstrating practically non-aerated pulmonary tissue.

other mechanical obstruction. The pulmonary vascular tree was normal.

Microscopic examination of the lungs revealed the alveolar walls to be prominently thickened and interstitial infiltration by inflammatory cells of the lymphocytic type, occasional neutrophils and some plasma cells were noted. There was a diffuse heavy outpouring of eosinophilic fluid coagulum within the alveolar spaces. Some pink-staining alveolar macrophages were noted. The overall process was advanced sufficiently to the point that the lung tissue was almost completely devoid of air.

Discussion

These siblings present fairly typical examples of the disease entity of Pneumocystis carinii pneumonitis or plasma cell interstitial pneumonia. This protozoan organism had been noted in rodents, rabbits, dogs and sheep, and produced a pneumonitis with death in these animals. It is associated with cytomegalic inclusion disease in 25 to 30 per cent of the cases.[2] In these two cases no such inclusions were found.

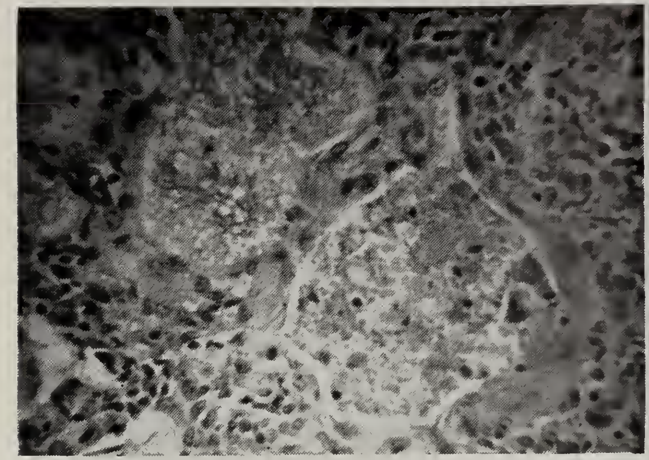

Fig. 2. H-E stain, ×1000. A high power view showing the coagulum filling the alveolar lumens, the partial hyaline membrane and the thickened infiltrated alveolar septae.

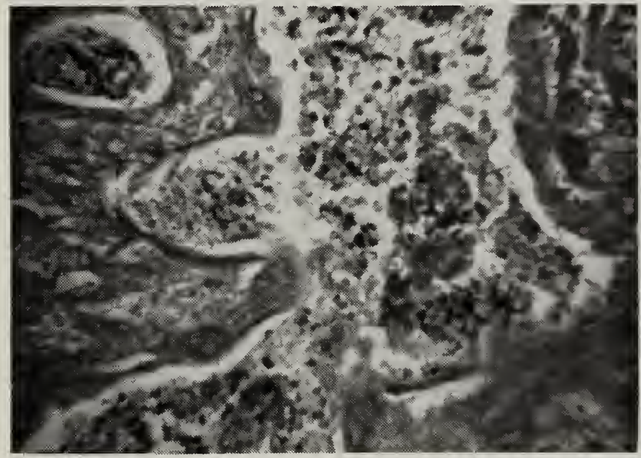

Fig. 3. Silver methenamine stain ×1000. Shows the protozoan bodies within the coagulum of the alveolar lumens.

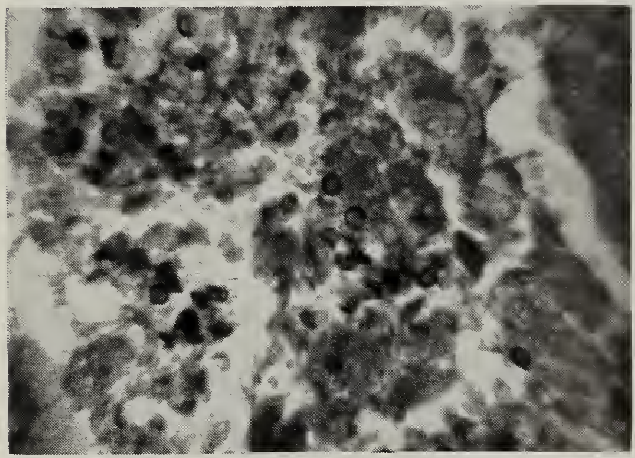

Fig. 4. Silver methenamine stain ×2000. The round to ovoid bodies of the Pneumocystis carinii organisms with occasional endospores.

No known treatment is available. The mortality it approximately 40 to 60 per cent. It has been found frequently associated with debilitating diseases. Postmortem cultures showed only a Pseudomonas aeruginosa and Monilia. Pneumocystis could not be cultured, which is in keeping with the findings of others.

In 1955 Vivell[3] published a report of a complement fixation test which had been developed to help in diagnosing the disease. The parasite was first demonstrated about 50 years ago in the lungs of small animals in Europe.

Recently, infections with this agent have occurred in epidemic proportions in central Europe in premature and newborn infants and since that time the disease has occurred in practically every portion of the world. In 1955 Lunseth[4] *et al.* described the first case occurring in the United States in Milwaukee, Wis. Since then other states have become represented in the growing list. In 1960 Anderson and Barrie[5] reported a case in a 36 year old male.

In most children involved there has been some predisposing or debilitating illness or a state of hypogammaglobulinemia[6] present.

Both patients reported presented essentially the same findings of difficulty in respiration with degrees of cyanosis, finally intractable pulmonary insufficiency and death in spite of all therapeutic measures. Prior to death no diagnosis of this disease was made or even entertained. The Pneumocystis organism cannot be cultured or transmitted through laboratory animals in the usual manner and is therefore thought to be a parasite. The parasitic theory is further strengthened by the eosinophilia that many patients manifest.

The radiologic findings in this disease were reported by Feinberg *et al.*[7] The most striking feature is a peripheral granular appearance which progresses to a coalescing nodular or a coalescing patchy type of "atelectasis" (fig. 1B, C, D). There is frequently an absence of hilar adenopathy. Falkenbach[8] in a review of 150 cases, states there is a generalized extensive bilateral bronchopneumonia with some interstitial emphysema. The changes seem to spread from the hilar to peripheral regions. The fine lines of increasing density fan out and leave uninvolved peripheral portions overdistended and emphysematous. All lobes are usually involved.

Summary

Two cases of pneumonitis caused by Pneumocystis carinii, occurring in siblings, is given. The

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PAUL G. STEINBICKER, M.D., *St. Louis*

The Surgical Treatment of Coronary Artery Disease

The surgical treatment of coronary artery diseases is discussed as to denervation of the heart for relief of pain, decreasing metabolic demands on the heart and increasing blood flow to the myocardium.

This is one of a series of seminars presented to the house staff of the Jewish Hospital, St. Louis, and edited by Michael M. Karl, M.D., Acting Director, Department of Medicine, the Jewish Hospital of St. Louis.

EVER SINCE Heberden's classic description of angina pectoris in the late eighteenth century and especially during the late nineteenth century, the efforts of many investigators to effect relief or cure for this syndrome have been recorded in the literature. The staggering incidence of coronary artery disease which has been recognized in this century has stimulated an ever increasing effort in this direction. Of particular interest are the surgical approaches to the problem.

Before proceeding further, it is well to note some of the difficulties that have prevailed throughout all of these studies. One of the most noteworthy is the recognition that the natural course of coronary artery disease is one of extreme variability, not only among different patients but even in the same patient at different times and under different circumstances. It is a disease classically affected by emotions, environments, and varying medical regimens. In addition, the ability to reproduce this disease in experimental animals is limited almost exclusively to the production of sudden coronary occlusion. Consequently the evaluation of experimental results must take these facts into consideration. The numerous difficulties encountered in the evaluation of particular methods of analysis will be discussed.

Basically the surgical approach to the coronary artery problem can be divided as follows:

1. Denervation of the heart for relief of pain.
2. Decreasing metabolic demands on the heart.
3. Increasing blood flow to the myocardium.

1. CARDIAC DENERVATION

The sensory innervation of the heart begins with nerve endings in the myocardium, endocardium, epicardium and the adventitia of the coronary arteries. The nerves are somatic afferent pathways which travel with the sympathetic nerves. They traverse the superficial and deep cardiac plexuses and course in the middle and inferior cardiac nerves which join the corresponding cervical sympathetic ganglia, the middle cervical ganglion, and the inferior or stellate cervical ganglion. All of the fibers then descend to the upper five thoracic ganglia and reach their cells in the spinal ganglia by passing through the white rami communicans into the central portions of the first thoracic and upper five intercostal nerves. There are also believed to be cardiac sensory nerves which course directly through the posterior mediastinum to the upper thoracic sympathetic ganglia. Thus it can be observed that all of the sensory fibers from the heart converge on the upper five thoracic sympathetic ganglia.

Ochsner and DeBakey[1] in a review published in 1937 note that in 1916 Jonnesco in Roumania for the first time removed the entire cervical sympathetic chain, including the stellate ganglion, bilaterally. Little other work is reported in this field, especially in the United States. It is obvious from this that the ideal operation would involve removal of the upper five thoracic sympathetic ganglia bilaterally which in a poor risk group would at best carry a high mortality.

Another less hazardous procedure was developed in this country by Swetlow in 1925, based on paravertebral alcohol injection. However in these patients the success rate is quite low even when the procedure is performed by experts. In many cases the pain relief is of short duration and re-injection is required.

Many technical and practical disadvantages can be found in the foregoing procedures. First it should be noted that destruction of the cardiosensory nerves automatically implies destruction of the protective alarm system. Second, no increased survival has been reported following these procedures. These methods, therefore, have never received enthusiastic attention from any workers in the United States and have mainly been abandoned. In the majority of reviews on the subject of surgery for coronary artery disease, they are mentioned only as a point of historical interest.

2. Decrease of Metabolic Demands

The surgical procedure of total thyroidectomy is now purely of historical interest in the treatment of coronary artery disease. In 1933 Blumgart, Levine and Berlin[3] reported on one patient in whom total thyroidectomy was done for angina with subsequent good relief of pain. In 1937 Persons and Purks[4] reported a collection of data from many sources on the efficacy of total thyroidectomy for angina. In 133 cases operated on for this indication, they reported excellent relief in 55 per cent and moderate to good relief in 28 per cent. The operative mortality in their series was about 4 per cent. Since the advent of radioactive iodine therapy, hypothyroidism has been induced many times by this means with good success and far less mortality and morbidity. Initially reported by Blumgart, Griedberg and Buka[5] in two patients, the radioactive iodine technic has achieved wide acceptance. Good result in the relief of angina pectoris has been obtained in nearly 75 per cent of patients followed for several years.[6, 7] However, in many cases the production of myxedema attends the administration of radioactive iodine. This may produce considerable discomfort and often necessitates careful and painstaking dosage adjustments.

3. Increase in Blood Flow

Direct and indirect surgical methods devised to improve the arterial circulation to the myocardium have been developed by various workers in the 1930's. The classical pathologic studies reported in 1940 by Blumgart, Schlesinger and Davis[8] showed that the coronary arteries are functionally end arteries, and that although intercoronary collateral circulation does exist in the normal heart, it is functionally insignificant. Also these collaterals are insufficient to maintain blood flow to the ischemic myocardium following sudden coronary occlusion. However, in hearts of patients with known coronary arterial occlusive disease collaterals of considerably larger diameter can be demonstrated. Also of interest is the fact that the disease is generally segmental and most often involves the proximal areas of the larger coronary arteries.[9] Based on such observations, investigators have sought to surgically relieve coronary occlusive disease by two general means: first, by increasing collateral circulation to the myocardium; second, by directly attempting to relieve or bypass the obstructed area.

One of the procedures designed to indirectly increase myocardial blood flow is bilateral internal mammary artery ligation. The pericardiaco-phrenic artery, which arises from the internal mammary artery at the root of the neck, courses with the phrenic nerve and gives off branches to the parietal pericardium. In 1955 Battezzati, Tagliaferro and DeMarchi in Italy amplified work of Fieschi done in 1939 and reported their results. In cadavers, they injected methylene blue and india ink into the internal mammary artery at the level of the second intercostal space. This was done after occlusion of the internal mammary distally and at the subclavian. They obtained excellent mapping of the vascular network of the parietal pericardium and on occasion, dye could be seen in the vascular rami of the myocardium. They also injected RAI after ligation of other collateral sources and were able to demonstrate RAI in the coronary sinus blood. They assumed that the source of these collaterals involved the pericardiaco-phrenic artery and the pericardial vessels through the reflections of the pericardium around the great vessels. They employed bilateral internal mammary artery ligation in 11 patients incapacitated with angina and claimed abolition of the angina in all patients.

In the United States, this procedure was adopted by Glover and his associates.[10, 11] They reported results in dogs which claimed significant protection against sudden ligation of the anterior descending coronary artery after bilateral internal mammary artery ligation. In addition, they performed the procedure on 50 patients and, in a follow-up period of only one to five months reported 68 per cent clinical improvement with an operative mortality of about 7 per cent. The ease of the surgery plus the relatively low mortality in a poor risk group of patients accounted for widespread temporary enthusiasm for the procedure. However Sabiston and Blalock[12] in a report in 1958 showed that the volume of flow through the pericardiaco-phrenic artery was extremely small with correspondingly low values for backpressure. Dimond[46] in a double-blind study also reported that clinical improvement was actually better following sham operation than it was after bilateral internal mammary artery ligation.

The use of procedures directly involving the pericardium and the production of pericardial adhesions have been many and varied. In 1939 Thompson[13] reported the production of pericardial adhesions in dogs by the instillation of magnesium silicate or common talc into the pericardial sac. This type of procedure found its most popular variation in what is known as the Beck I procedure. This consists of abrasion of the epicardium, combined with poudrage and partial ligation of the coronary sinus. In a report in 1954, Beck[14] reported experimental data and patient results for both the Beck I and the Beck II operations. The Beck II is a much more radical procedure involving, in two stages, the placing of a vein graft from the aorta to the coronary sinus and two to three weeks later a second operation in which partial occlusion of the coronary sinus at its entry into the right atrium is accomplished.

In a questionnaire which he sent to patients operated on from three months to five years previously, the following results were obtained:

TABLE 1

FOLLOW-UP RESULTS

	Total	*Pain Free* PER CENT	*Less Pain* PER CENT
Beck I	33	36.3	48.5
Beck II	43	39.6	48.8

At about this point Beck himself discontinued advocating the Beck II procedure in view of the high mortality versus the slight increase in clinically good results. Also he noted that in several patients the vein graft produced symptoms of congestive failure. In addition, as noted by Beck himself and reported by Leighninger[15] in 1954 the vein graft rapidly clots and any possible connection between the aorta and the coronary capillary circulation is lost.

Again in 1958 Beck[16] reported operative mortality of 6 per cent with results classified as 32 per cent excellent and 62 per cent good, with the Beck I procedure in 347 patients.

Other procedures which enjoyed varying degrees of temporary popularity involved, often in addition to poudrage, the grafting of various structures to the myocardium.[17-22]

In criticism of such procedures as poudrage and cardiopexy Gage *et al.*[23] used the introduction of small thrombogenic wires into the anterior descending and circumflex coronary arteries of dogs to produce gradual coronary occlusion. These workers showed no increase in survival rate or decreased infarction size after poudrage. In particular criticism of the Beck operations involving coronary sinus ligation, Gregg and Sabiston[24] note that the blood collected from retrograde bleeding of a proximally occluded coronary artery has not necessarily traversed the capillary bed and that such backflow is measured against zero resistance. Also they note that in all the experimental studies coronary artery ligation was always preceded by the surgical procedure and that it is doubtful whether any such procedures can produce an increase in collaterals over and above that which is produced in the natural course of coronary artery disease.

Another rather interesting means of establishing improved coronary blood flow which enjoyed some popularity in Canada was the Vineberg procedure. In 1946, Vineberg[25] showed experimentally that collaterals develop in the heart of the dog between the coronary arteries and the internal mammary artery which is pulled into a tunnel developed in the myocardium with open bleeding intercostals. In 1957 and again in 1958 Vineberg[26, 27] reported results of 88 cases in which this type of operation was performed. In a follow up of six months to nine years he tabulated his results as follows:

TABLE 2

FOLLOW-UP RESULTS

	Angina Decubitus	*No Angina Decubitus*
Total	20	68
	PER CENT	PER CENT
Mortality at surgery	45	5.8
Good result	35	77

Critics of this procedure have shown, as have Bakst *et al.*[28] that there is no increase whatever in coronary artery backflow after internal mammary artery implantation and that the implanted arteries were 95 per cent completely occluded. Sabiston and Blalack[29] implanted the left carotid artery in the left ventricular myocardium of dogs and demonstrated vascular connections between the implanted artery and the coronary tree in 82 per cent by injection technics. However all of these anastomoses were quite minute, and only a small volume of blood could be shown to flow from the implant to the myocardium. Thus the minimal augmentation of blood flow combined with the considerable technical problems necessary for a successful result has prevented any wide acceptance of this procedure.

Another operation developed by Vineberg[15] involves (1) the removal of the epicardium, (2) suturing to the myocardium of 1/16 inch thick sheets of ivalon sponge and (3) removal of the serous layer of the pericardium. This operation in dogs provides 85 per cent protection against ameroid coronary artery constriction death. These ameroid constrictors are small devices applied around the coronary arteries which absorb water and slowly constrict the arteries. The mortality is 85 per cent within 28 days in dogs. Vineberg claims that vessels grow from the pericardium through the interstices of the sponge into the myocardium.

Another type of procedure which for obvious reasons has never become popular is the attempt by Goldman[30] and Massimo[31] to revascularize the myocardium by inserting small plastic T-tubes from the left ventricular cavity directly into the myocardium.

Day and Lillehei[32] produced in dogs a left auricle to pulmonary artery shunt which reduced immediate mortality from circumflex ligation from 72 per cent to 10 per cent. They theorized that the addition of unsaturated blood into the coronary arterial tree stimulated intercoronary collateral development. They reported this procedure having been done on one patient with excellent relief of intractable angina.

The direct surgical approach to coronary artery disease involves attempts to increase arterial inflow through the coronary arteries by removal of the occlusive lesion or by anastomosis of a systemic artery to the coronary arteries distal to the occlusion. This also is based on the previously noted fact that patients with angina pectoris not infrequently have partial or complete occlusion of a major coronary artery in the proximal portion of the vessel which is segmental in character with a relatively normal distal arterial bed.[9]

Many authors have performed experimental coronary artery surgery, primarily in the dog, in an effort to perfect various procedures. Absalon *et al.*[33] in 1956 operated on cadaver hearts wherein they did coronary artery endarterectomy not only on main coronary arteries but also on the first branches thereof. They occasionally encounted arteries with full thickness plaques which they found would have been impossible to repair. Baker and Grindlay[34] performed internal mammary to coronary artery anastomosis in dogs. Thirteen of 16 dogs survived immediately and five survived six months or more. The major cause of death in these animals was anastomotic occlusion. Carter and Roth[35] described in 1958 a non-suture coronary artery anastomosis. Twenty-four animals were done and 20 of the anastomoses were patent after seven to eight weeks. Thal *et al.*[36] described a direct suture anastomosis of internal mammary to the coronary arteries with 50 per cent success in dogs but noted that animal arteries are healthy whereas a quite different situation exists in patients with angina.

Since much difficulty in the experimental animal had been encountered in respect to occlusion of the anastomosis at the site of systemic to coronary artery anastomosis, most workers have concluded that the more productive line of attack, at least for the present, lies with attempts at coronary endarterectomy. Bailey and May[37] in 1957 described the first two reported successful cases in which coronary endarterectomy was performed. Both patients were in their early fifties and both had severe angina, medically intractable.

Cannon and Longmire[38, 39] in 1959 reported on nine cases in which they performed coronary endarterectomy. Three of the nine were operative deaths. They selected patients all of whom had severe intractable angina pectoris totally resistant to medical therapy. They concluded that at the present time surgical attack on coronary artery disease should be reserved for the desperate risk patient to whom nothing else can be offered. They noted that in previous experience with distal extremity atherosclerosis there invariably existed a cleavage plane between the relatively intact outer arterial wall consisting of media and adventitia and the thickened subintimal plaque. Thus the lesion consists of a fairly normal outer sheath containing an occlusive core of material easily separated from the wall by virture of the cleavage plane. May and Bailey[40] reported their results in six patients who underwent coronary endarterectomy with good result and no operative mortality.

Another procedure which has been studied in the laboratory of DeBakey[41] uses the patch graft. They have used this procedure with eminent success in other well localized forms of atherosclerotic occlusive disease with or without endarterectomy and have found it particularly valuable in lesions involving smaller arteries such as the vertebral, carotid or popliteal. The small patches inserted provide replacement of a sufficient portion of the circumference of the artery to permit restoration of a normal lumen after arteriotomy. On this basis, these authors advise the use of a patch graft in certain forms of coronary artery surgery with or without endarterectomy.

Another more recent semi-surgical treatment used in one phase of coronary artery disease bears mention here. Recently Jacobey, *et al.*[42] reported experimental use of cardiopulmonary bypass in dogs with acute experimental coronary ligation. They call the method "counterpulsation" and it has reduced immediate mortality from 54 per cent to 11 per cent and produced marked and lasting increase in the number of intercoronary collaterals. They connected the pump synchronously with the R wave of the electrocardiogram and removed blood from the aorta during systole and replaced it during diastole thereby increasing the aortic diastolic pressure and consequently the coronary perfusion pressure. Previously in 1957, Stuckey[43] had reported the use of the cardiopulmonary bypass in coronary occlusion in man but only to support falling blood pressure.

It becomes readily apparent that many procedures have been advocated at various times and by various investigators for use in the relief of coronary artery disease itself or its symptoms. There have also been investigations designed to evaluate the results of these procedures. As noted previously the methods most commonly used are the reduction in mortality rate following anterior descending coronary artery ligation in "protected" animals and the retrograde coronary backflow method. Also used is the morphologic demonstration of new vessel formation. Evaluation of the clinical applications of these procedures is largely based on such factors as survival rate, symptomatic improvement and increased work capacity. Any efforts to assess the value of these procedures are quite difficult, as noted before, both due to the inherent variability of the disease and the inherent errors in the criteria of evaluation, some of which have been noted. DeBakey has noted a striking similarity in the clinical results following widely varying procedures which may suggest that all of them possess a common factor other than improvement in coronary circulation especially since some procedures which have been shown to be of clinical benefit have also been shown to produce little or no improvement in coronary circulation. This is well exemplified by the case of internal mammary ligation.[44] Obviously the major difficulty in the critical evaluation of many of these procedures lies in the lack of precise and reproducible means of measuring coronary artery blood flow.

Whether or not surgery has a place in the treatment of coronary artery disease remains to be proven. Many of the procedures previously advanced have fallen by the wayside but others still have strong supporters. It is certain that much further perfection of technic and methods of evaluation must be done but it is probably equally as certain that there will be many to proceed with this work in the near future.

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(Continued from page 771)

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PNEUMONITIS

(Continued from page 774)

clinical, radiologic and pathologic features are noted.

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Correction: In the article in the August issue "Complications of Gastric Freezing in the Treatment of Duodenal Ulcer" by Drs. Jacob, Devins and Rubin, figure 1 was reversed as was therefore the caption. The picture and caption should have appeared as follows:

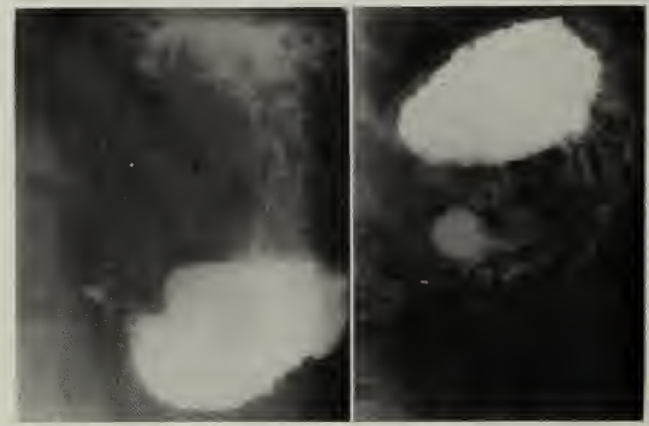

Fig. 1. a. Patient R. M., prefreeze stomach x-ray. b. Post-freeze stomach x-ray. Note radiation of folds to ulcer scar.

The Doctor's Visit, Jan Steen 1626-1679, Mauritshuis, The Hague

In Diverticulosis and Diverticulitis…

METAMUCIL® brand of psyllium hydrophilic mucilloid

"**Diverticulosis** … a low-roughage diet is advisable.… Constipation is avoided, preferably by the daily use of Metamucil.

"**Diverticulitis** Mild, chronic symptoms of diverticulitis, such as diarrhea or flatulence also are treated[1] by low-roughage diet, adequate fluid intake and Metamucil.…"

Usual Adult Dosage: One rounded teaspoonful of Metamucil (or one packet of Instant Mix Metamucil) in a glass of cool liquid one to three times daily.

Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons containing 16 and 30 single-dose packets.

1. Welch, C. E., Diverticula of the Alimentary Tract, in Conn, H. (editor): Current Therapy—1961, Philadelphia, W. B. Saunders Company, 1961, pp. 224-225.

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Each tablet contains:

Salicylamide	250 mg.
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Arthralgen, a better-tolerated analgesic formulation of time-tested ingredients, works faster to free the arthritic from his pain without salicylate side effects. Since its analgesic components require no chemical conversion to act in the body, Arthralgen's pain relieving benefits are immediately available to provide a smoother, more rapid obtundation of pain than can be achieved with many true salicylates.

Arthralgen is especially useful for the prompt relief of early morning stiffness and pain with less risk of gastric irritation. And since Arthralgen contains no sodium it is safe for long-term use in arthritics who have other conditions which nece
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Prednisone	1 m

The basic Arthralgen formulation plus predni
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Prednisone has three advantages over cortison
hydrocortisone, and ACTH. They are: (1) lack c
sodium retention, (2) absence of increased potas
sium excretion, and (3) the unlikelihood of steroic
induced hypertension.*

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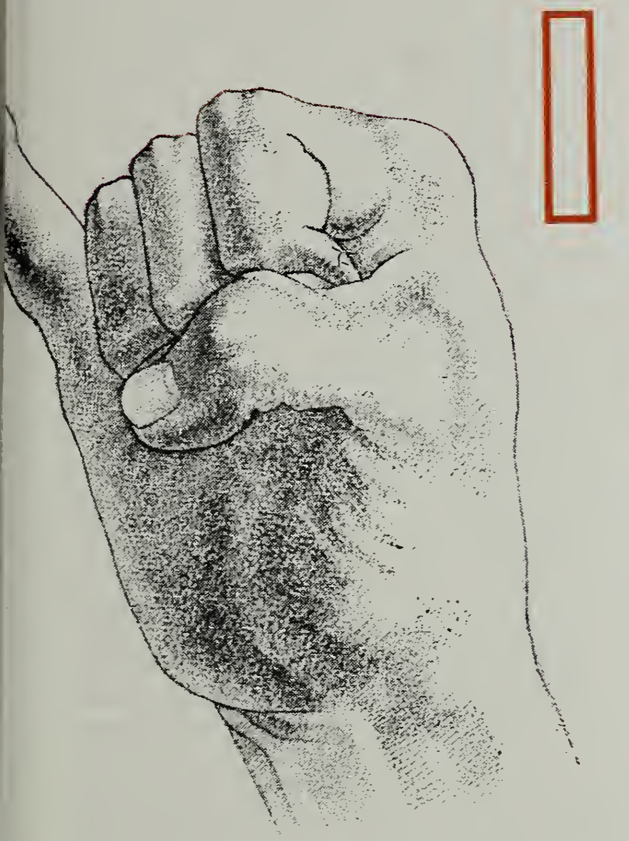
Arthralgen and Arthralgen-PR are indicated i
the management of rheumatoid arthritis, acut

rthritic joints from



y arthritis, rheumatoid spondylitis, osteoar-
is, bursitis, fibrositis, and neuritis. Arthralgen
be used for analgesia in colds, flu, and
ous myalgias.

SAGE: One or two tablets four times a day.
r remission of symptoms, dosage should be
uced to the minimum maintenance level.

E EFFECTS: Nausea, GI upset, or mild salicy-
may rarely occur. Symptoms of hypercorticoid-
dictate reduction of dosage of Arthralgen-PR.

ECAUTION: Reduction in dosage of Arthral-
-PR given over a long period should be gradual,
er abrupt.

NTRAINDICATIONS: Hypersensitivity to any
redient.

with any drug containing prednisone, Arthral-
-PR is contraindicated, or should be administered only with care, to patients with peptic ulcer, tuberculosis, nephritis, diabetes mellitus, acute psychoses, Cushing's syndrome (or Cushing's disease), overwhelming spreading (systemic) infection, or predisposition to thrombophlebitis.

Arthralgen-PR is generally contraindicated in patients with uremia and viral infections, including poliomyelitis, vaccinia, ocular herpes simplex, and fungus infections of the eye. It is also contraindicated in patients with chicken pox or susceptible persons exposed to it.

SUPPLY: Arthralgen (white, scored) and Arthralgen-PR (yellow, scored) tablets are available in bottles of 100 and 500.

*Cohen, et al: J.A.M.A., 165:225, 1957.

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BUFORD T. CASEBOLT, M.D., ***Kansas City***

Massive Colonic Hemorrhage of Occult Source: Surgical Management

Case Report

A case of massive hemorrhage from the colon of occult source is presented together with a discussion of the management of the case and the merits of the method.

Dr. Casebolt is in the Department of Surgery, Baptist Memorial Hospital.

The problem of massive hemorrhage from the intestinal tract of hidden or unknown source is one of the most difficult problems confronting the surgeon at operation. Although this problem is more commonly encountered in the upper intestinal tract, it occasionally occurs in the colon. There is a scarcity of information in the standard textbooks of surgery as well as a paucity of material in the surgical literature concerning this problem.

This paper consists of a case report of such a problem managed by transverse colostomy followed, 36 hours later, by definitive right hemicolectomy with resultant control of the massive hemorrhage.

Case Report

History.—The patient was an 83 year old retired minister who had enjoyed excellent health until nine hours prior to admission on March 3, 1963, when he developed rectal bleeding. The bleeding was, for the most part, bright and dark red, although there were occasional portions of melena. Three weeks before admission, he had noted left lower quadrant abdominal discomfort which was relieved by a digestant-laxative and aggravated by constipation. This persisted until the time of admission.

Physical Examination.—The patient was an elderly, well preserved man in no acute distress. Examination of the abdomen was non-revealing. Rectal examination was normal except for the presence of dark red blood mixed with feces on the gloved examining finger.

Admission Laboratory Studies.—The hemoglobin was 10.5 gm. The white blood count was 7,900 with a normal differential. Urinalysis revealed pH 5; specific gravity, 1.029; microscopic showed 2 to 4 white blood cells per high power field. Blood urea nitrogen 34 mg. per cent. Chest fluoroscopy revealed normal lung fields and cardiac silhouette. A flat plate of the abdomen demonstrated a normal gas pattern and degenerative arthritic changes of the lumbar spine. A barium enema revealed diverticulosis of the sigmoid colon. On the second hospital day an upper gastrointestinal series showed a hiatus hernia with esophageal reflux, a deformed duodenal bulb with an active ulcer crater and duodenal diverticula.

Hospital Course.—On the day of admission two blood transfusions were administered, and several bloody stools were passed. On the morning of the second hospital day the hemoglobin was 9.9 gm. Later, while the patient was in the x-ray department he passed a large bloody stool and experienced transient mild shock.

On the morning of the third hospital day the hemoglobin was 7.9 gm. and the BUN was 36 mg. per cent. During the day repeated massive bloody stools were passed, and recurrent mild shock occurred. Seven blood transfusions were given throughout the day, and serial hemoglobin determinations failed to show improvement.

At exploratory laparotomy on the evening of the third hospital day, the entire colon was distended with blood. Occasional patches of bluish discoloration were seen through the wall of the terminal ileum. However, the remainder of the small intestine and upper tract appeared negative for contained blood. Because of the x-ray report of an active duodenal ulcer and several faint occult blood positive tests on vomitus, and because of the suggested presence of a small amount of blood in the terminal ileum, a gastroduodenotomy was made. With no blood or ulceration present, the pylorotomy was closed transversely. Examination of the small intestine and colon failed to suggest any site of hemorrhage. The diverticula known to be present in the sigmoid colon were examined, but revealed no evidence that they might be the source of hemorrhage. A transverse loop colostomy over a glass rod was constructed, and the abdomen was closed. After appropriate dressing the colostomy was immediately opened by hemitransection.

On the following day the hemoglobin was 9.2 gm., the BUN was 35 mg. per cent, and the patient was free of shock. Two units of blood were administered throughout the day, and a later hemoglobin was 10.5 gm. This decreased still later to 9.1 gm., and was thought to be due to corrected dehydration. The patient passed several wine-colored (old blood) stools per rectum. That evening he developed a sudden rapid heart beat which, on electrocardiogram, proved to be paroxysmal atrial tachycardia. Corrective medication was begun by a consulting internist.

On the patient's fifth hospital day, a 50 per cent prothrombin time was corrected with vitamin K_1 oxide. The abnormal cardiac rhythm periodically converted to normal and reverted to atrial tachycardia during the morning. However, by afternoon, with further digitalis, a normal rhythm was established. In the afternoon (36 hours after transverse colostomy), massive hemorrhage recurred from the right limb of the transverse colostomy, with shock, and the patient was returned to the operating room.

Under anesthesia, a large catheter was passed into the right limb of the colostomy with aspiration of large quantities of fresh blood from the right colon. A sigmoidoscopy was accomplished which revealed only small amounts of old blood present in the rectum. Upon opening the abdomen, the right colon was enormously distended with blood. A right hemi-colectomy was performed with end to end ileotransverse colostomy, including resection and elimination of the colostomy. The patient received two units of blood before and during surgery. His general condition seemed to improve rather dramatically from the time the clamp was placed on the vascular pedicle of the mobilized right colon. The right colectomy specimen was examined immediately by the pathologist. There was an eroded area of the mucosa of the ascending colon with adjacent focal submucosal hemorrhage. Microscopic examination later revealed focal ectasia of submucosal blood sinuses and focal submucosal hemorrhage.

The patient's postoperative course was complicated. He became uncooperative, disoriented and agitated. Inhalation therapy was administered to prevent atelectasis and pneumonia. Vasopressors and hydrocortisone were administered to support the blood pressure. Intravenous broad spectrum antibiotics were given. Tranquilizers controlled the agitation. A Levin tube was passed to provide prophylactic proximal decompression.

On the first day after the right colectomy, the patient was hypotensive even though the hemoglobin was 11.4 gm. A blood volume revealed a total deficit of 700 cc., a plasma surplus of 300 cc., and a red cell mass deficit of 1000 cc. (patient's volume as compared to the mean normal). One unit (250 cc.) of packed cells was administered to begin correction of the marked deficit in red cell mass.

On the second day after right colectomy, the patient still required vasopressors to maintain his peripheral circulation. A second unit of packed cells was given. A chest x-ray revealed infiltration in the left lower lung field and a questionable increase in pleural fluid on the right suggesting atelectasis and pneumonitis and/or cardiac decompensation. Increased doses of cardiac medication were administered by the consulting internist.

On the third day, flatus was passed and a liquid diet was begun. This required supplementation by tube feeding because of the patient's mental status. The hemoglobin was 10.2 gm.

On the fourth day additional flatus was passed, and an enema produced a moderate amount of formed stool. A low serum potassium (2.7 mEq/L) was corrected with oral potassium. A progress chest x-ray revealed substantial improvement. The hemoglobin was 10.9 gm. A blood volume revealed a total deficit of 400 cc., a plasma surplus of 600 cc., and a red cell mass deficit of 900 cc. Another unit of packed cells was administered for correction. During the evening several 100 cc. of formed stoods were passed.

By the sixth postoperative day vasopressors which had been needed in decreasing amounts were discontinued, and ambulation was begun. Stools were well formed and normal in appearance. The hemoglobin was 10.9 gm.

On the ninth postoperative day the serum sodium was 125 mEq/L, and correction was begun with oral salt tablets. The hemoglobin was 11.2 gm.

By the eleventh postoperative day, the patient's sensorium and mental status had substantially improved. On the sixteenth postoperative day the hemoglobin was 11.8 gm. The bowels were moving regularly. The patient's mental status was normal, and he was fully ambulatory. On the seventeenth postoperative day (the twenty-first hospital day), the patient was dismissed. He received a total of 13 whole blood transfusions plus three transfusions of packed cells throughout his hospital course.

Post-dismissal follow-up at eight months has revealed no further hemorrhage, and the patient is enjoying good health.

COMMENT

In the case presented, the patient's age with attendant cardiac and cerebral problems compounded an already difficult problem of massive hemorrhage. As a result of preoperative diagnostic x-ray studies, there were multiple possible sources of hemorrhage which included hiatus hernia, an active duodenal ulcer, duodenal diverticula and sigmoidal diverticula. These x-ray findings, together with a history suggestive of recent diverticulitis, all proved to be misleading.

During the initial exploration, a gastro-duodenotomy was performed for reasons expressed in the case report, although the preponderance of evidence strongly suggested that the colon contained the site of hemorrhage. In the 36 hour period between transverse colostomy and later definitive right hemi-colectomy, passage of some blood per rectum with paroxysmal atrial tachycardia simulating shock, almost misled us into premature reexploration. However, an electrocardiogram revealed the true nature of the clinical problem.

A competent ileo-cecal valve successfully preventing reflux into the terminal ileum was helpful at both explorations. In the second exploration, the resultant severe distention of the right colon with blood (contained proximally by the valve and distally, to some extent, by the transverse colostomy stoma), concisely localized the site of hemorrhage.

Examination of the right colectomy specimen by the pathologist revealed a disconcerting absence of anticipated significant pathology. However, this caused no great alarm in view of the overwhelming surgical evidence that the bleeding point was located in the specimen.

Postoperatively, the hemoglobin determinations proved to be a poor index of blood "loss-replacement." Blood volume studies promptly revealed a marked deficit in red cell mass. The patient did not stabilize his blood pressure, nor could vasopressors be withdrawn until this defect was corrected by transfusions of packed cells.

General Considerations

Much of what has been written and said about massive hemorrhage from the colon of occult source concerns multiple colotomies to localize the site of hemorrhage and the relative merits of "blind" left versus right versus total colectomy. Sigmoidoscopy must be performed to eliminate the distal 25 cm. of the gastrointestinal tract as containing the source of hemorrhage.

There are several benefits of transverse colostomy as an initial stage in localizing the hidden source of massive colonic hemorrhage. The procedure can be performed without contamination of the abdomen which might result from multiple colotomies or attempts to sigmoidoscope the colon between colotomies. Preliminary colostomy, if necessary, followed by definitive right or left hemi-colectomy is a more certain method of control when contrasted with a "blind" empiric partial colon resection which might not eradicate the source of hemorrhage. When contrasted with total colectomy, two two-stage procedure avoids the sequela of total or subtotal extirpation of the colon. While less tangible but of possible benefit from transverse colostomy, cessation of hemorrhage might result from defunctionalizing the left colon.

The possible added morbidity of two operative procedures as contrasted with a single definitive procedure has been debated many times by others, and seems inappropriate to the problem being discussed. Such a comparison assumes an even lesser status when contrasted with continued or repeated hemorrhage and blood loss shock with attendant visceral sequela and the danger of multiple replacement transfusions.

A disadvantage of "two-staging" massive colonic hemorrhage of unknown source is the added blood loss in the time interval between transverse colostomy and definitive colon resection which probably totaled 1000 to 1500 cc. in the presented case. This might be avoided by empiric "blind" hemi-colectomy if the patient was fortunate enough to have the bleeding point contained in the specimen.

When performing surgery for intestinal hemorrhage, especially when the source is obscure, incisions and anastamoses of the gastrointestinal tract should be performed with meticulous attention to local hemostasis. This prevents the anastamosis, or suture line, from being an additional source of hemorrhage, which could totally confuse an already difficult problem of localization.

When constructing a transverse colostomy as a preliminary stage for massive hemorrhage of obscure source, the fascial closure should be loose so as to encourage prompt function. A loop colostomy over a glass rod with loose closure of the fascia and without diversion served the purpose well in the presented case. For similar reasons, the colostomy should be immediately opened so that further hemorrhage can be promptly detected. Hemi-transection immediately following closure of the abdomen worked well in this case.

An immediate postoperative effort to remove the bloody contents of the left colon in the portrayed case might have avoided later confusion which developed when old blood was expelled per rectum after transverse colostomy. Such methods as high volume enemas and through-and-through irrigations of the defunctionalized left colon were avoided because of the presence of known sigmoid diverticula in the presented case.

There are undoubtedly many cases of this nature in which the index of suspicion is sufficiently great at laparotomy to permit definitive colon resection. Ferguson[1] states that "in several of his cases, careful inspection of the colon led to the discovery of a focus of dilated subserosal vessels which were mostly veins. A colotomy in this area led to the discovery of a hemorrhaging telangiectatic site in the right colon. A conservative right colectomy, including the telangiectasis, has resulted in cessation of bleeding in all cases."

The appearance of the stools is helpful in differentiating upper from lower tract hemorrhage, although this is of doubtful value in localizing the site within the colon. The presence of sigmoid diverticula and a recent history suggestive of diverticulitis in the presented case almost misled us into an itital "blind" left hemicolectomy and probable catastrophy. While a good history and radiologic workup are of value, surgical management cannot be based on these alone, as demonstrated in the presented case. Exploration while the patient is actively hemorrhaging has been proposed as an aid. However, from the practical standpoint, this is difficult to manage, and more often than not, the hemorrhage will have stopped at laparotomy.

CONCLUSIONS

1. A case of massive hemorrhage from the colon of occult source is presented.
2. Management consisting of initial transverse colostomy followed by definitive right colectomy when hemorrhage recurred was successfully employed in the presented case.
3. The merits and disadvantages of this method of management are assessed and compared with alternate methods.
4. Initial transverse colostomy followed later, if necessary, by definitive colectomy should be strongly considered for massive hemorrhage from the colon when, at exploration, the origin cannot be determined.

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NORMAN A. WELCH, M.D., *Boston, Mass.*

Unity in Medicine

Special Article

This address was presented by Dr. Welch when he was inaugurated as President of the American Medical Association at ceremonies at the California Masonic Temple, San Francisco, Calif., on June 23, 1964.

I ACCEPT the office of President of the American Medical Association with gratitude and humility. I am aware of the responsibilities of my new position, and I pledge all of the dedication at my command in discharging these responsibilities.

We are particularly honored by the presence of those who share this platform this evening. Here we have the presidents, or his appointed representative, of the major medical specialty organizations in the United States. I believe it would be safe to say that this occasion is the first time in the history of organized medicine that the presidents of so many medical specialty organizations have assembled together.

I want to express my personal thanks to each of them for their presence. This occasion is historic for all of medicine.

As I pondered over what contribution I might make as President of the American Medical Association, I was mindful of the responsibilities that medicine must assume in our modern world —in coping with the explosion of scientific knowledge, in providing quality medical care and in meeting the challenges our profession faces in the socio-economic and political life of our day.

It is readily apparent that these responsibilities demand the time, talents and dedication of all physicians united together, and working together to improve the quality of care and its method of distribution and financing for all of our citizens. Hence, I chose as the central theme for my remarks to you this evening, "Unity in Medicine."

To unite is to bring together. It is the melding of all of the components of medicine to a singleness of purpose. And so, I ask that you, the presidents and representatives of medical specialty organizations, join with me and the AMA to forge the strongest bond possible between all facets of medicine.

In recent years many spokesmen, both in and out of medicine, have expressed intense concern over the rising tide of specialization in the United States. It would be difficult to determine the number of medical specialties practiced at the time the AMA was organized in 1847; however, we do know that today the American Medical Directory lists 35 recognized medical specialties all of which are represented by one or more medical specialty organizations. In all, 230,000 physicians, including those in general practice, have requested they be given specialty designations in the AMA Directory.

The diversity of specialization speaks for itself in terms of medical progress. The medical advances during the past half century exceed that of all preceding centuries. The natural result of this impressive accumulation of medical knowledge is the constant and persistent growth of specialization. It is impossible for one man to know all in this world of medicine, just as it is impossible for one man to know all of this world of engineering, chemistry, law or the many diversified fields of human endeavor.

In medicine, it is impossible for one to follow its rapid transformation, impossible to master all of the technics, diagnostic and therapeutic. Today, specialization is a mark of scientific, technical and social advance which promises to increase rather than decrease.

This outstanding progress in medicine as evidenced by increased specialization constitutes one of the crucial problems of our times. Dr. Ignacio Chavez, speaking before the Third World Congress of Cardiology, warned that specialization *can* mean "fragmentation, partial vision, limitation of our horizon."

"What is gained in depth is lost in breadth," Dr. Chavez says. His statement suggests that there can be danger of abandoning the general field of medical knowledge in order to master one field. Under such conditions, he says, "man thus confines himself to one point and sacrifices the whole vision of his science and the universal vision of his world." His conclusion is that preeminence of specialization is "fertile in valuable achievements, but also pregnant with risks."

These risks are becoming more and more apparent as medical specialization and its concomitants in medical education, and hospital care generate friction between the full-time salaried staffs and the private practitioner.

It is not uncommon to hear reference made to the splintering effects of specialty organizations on the whole of medicine. Doctor Chavez referred to this when he said specialization means "fragmentation, partial vision, limitation of our horizons." The fact that a physician has decided to continue his education in a specialized field is indicative of his interest. Therefore, it is only natural for him to affiliate with a corresponding specialty organization; to attend its meetings, local, state and national, and to participate in the formulation of its policies. The impact of this divided allegiance between the local county medical society and the specialty organization is often quite apparent. In many instances, this allegiance to the specialty organization deprives the county medical society, the state medical association and the AMA of capable leaders who should be sharing their talents between the specialty society and the AMA's constituent and component societies.

The partial vision and limitation of horizons of which Chavez speaks may be demonstrated by the specialist when he is asked to take part in medical society activities unrelated to his specialty. It is then that some excuse themselves from these responsibilities by contending that medical organizations should confine their interest and activities to the science of medicine.

I need not remind you, the presidents of medical specialty organizations and the audience, that the professional responsibilities of a physician encompass three major responsibilities: the science, the art, and the socio-economic and political aspects of medicine.

Proficiency in the science of medicine is not enough; medical knowledge must be skillfully and sympathetically applied to each patient. Moreover, every physician should be cognizant of, and interested in, the socio-economic impact of illness upon his patient and the community in which he lives, as well as the potential effect of government-sponsored programs on the practice of medicine.

A physician cannot divorce himself from the political impact of government on the life of his patients, particularly on issues involving health and medical care. This fact is forcefully demonstrated if one notes the extent to which governments, local, state and national, are involved in the financing of medical care. Of more than 33 billion dollars spent in the United States for health care in the 12 months ended June 30, 1963, roughly one fourth or 8 billion 481 million dollars came from public funds. Private expenditures were approximately 25 billion dollars of which 15 billion went for general hospital and medical care.

Although splintering effects of specialization of medical organizations are clear, medical specialty organizations have contributed notably to the progress of medicine. Their devotion to the dissemination of new knowledge within their specialty is significant in terms of improved patient care. Their contribution to medical education in upgrading the standards of residency training programs is unprecedented. And their adherence to high moral and ethical standards is deserving of our praise. Furthermore, as medical knowledge expands, we shall see more specialties develop and specialty organizations formed.

I have just returned from the World Medical Association meeting in Helsinki, Finland, where I represented the AMA as a delegate. I was interested in the number of physicians from other countries who singled out the AMA representatives and engaged us in conversation concerning the status of socialized medicine legislation, as they described it, now under consideration by our Congress.

Their fervent appeal was the same: Do *not* let it happen in the United States. "Your country," they told us, "is the greatest stronghold of private medical practice in the world; the American medical profession is a boon to us because of the strength of your determination to remain free." "We are constantly struggling," they said, "to expand what little professional freedom is left to us and to our patients. If you fall under the domination of government, we shall lose the last important beacon of medical freedom left in the world."

When I asked why the medical profession had not been more effective in its opposition to such government dominated programs, two reasons were repeated over and over again. One was that the medical profession lacked a unity of purpose and action which weakened the overall structure and impact of medicine as a profession.

And the second reason was the ineffectiveness of their national organizations in counteracting the propaganda and political action of the Socialist governments which control most of their nations. One physician readily admitted that doctors were forced to create an opposition organization completely separate from the national medical association, because many of the leaders of their national association were either full or part time employees of the government and sympathetic to the nationalization of medicine.

In most areas of the world physicians have lost a significant part of their freedom to practice as their training, experience and professional judgment dictate. Usually, this situation has developed because the profession was split into contending segments that invited capture by government. The technic of "divide and conquer" has been all too successful in many lands. This same technic is not without its disciples in this country. Here too, there are those who exploit every opportunity to divide the medical profession. They pit the general practitioner against the specialist, the full time salaried employee against the private practitioner, the medical college against the medical society, the full time salaried chief of staff against the professional staff, and even at times the medical specialty organization against the American Medical Association.

We must not let this happen in the United States of America.

I would appeal to those of you who represent specialty organizations, to the individual specialist, to the general practitioner, to those in administrative medicine, in government service, and to the medical educators to impress upon your members and colleagues that if medicine is to serve the public in the future to the high degree that it has in the past, it must be united, standing strong and firm with a heart and a conscience tuned to public need, with a respect for the rights and privileges of the individual, and with an abiding faith in our free competitive system of medical practice.

Only one organization represents all of us, acts for all of us, serves us and asks that each of us, no matter what his specialty, take part in its activities. That is the American Medical Association, of course, and if you will it, together we can reestablish and exceed whatever measure of unity we have achieved before; while, at the same time, preserving that incomparable quality of care that specialization has helped to create.

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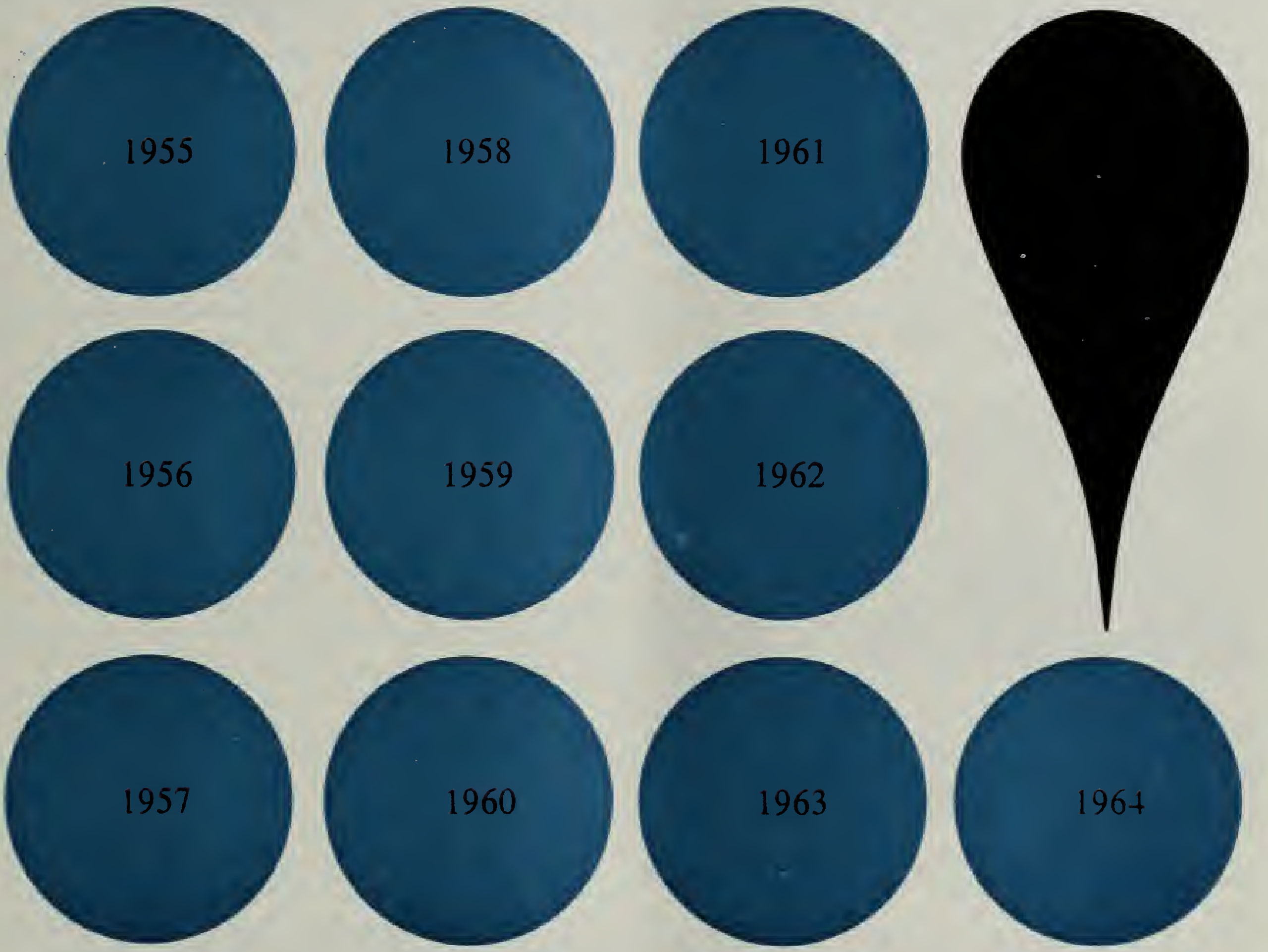
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Ramblings of the Field Secretary

An MSMA Workshop on political action and legislation for representatives of county medical societies was held in St. Louis at the Chase Hotel on Saturday evening, May 16 and Sunday, May 17. The Saturday evening affair began with a social hour followed by dinner and then a keynote talk by Mr. Tom Martin, Washington, D. C., Vice President of Mid-Continent Gas and Oil Association. Mr. Martin is a former minority counsel of the House Ways and Means Committee of the U. S. House of Representatives. His subject was, "Politics 1964." Mr. Martin's broad background and vast knowledge of the Washington scene made his remarks most interesting, informative and provocative. In addition to representatives of county medical societies, many of the doctors' wives and other guests attended this session.

On Sunday morning, May 17, special talks were given on the following subjects, "Operation Hometown," "Political Action," and "Legislation." The respective speakers on these subjects were: Mr. Frank K. Woolley, Chicago, AMA Field Representative; Mr. David Baldwin, Chicago, Assistant Director, AMPAC, and Mr. James W. Foristel, Washington, D. C., AMA Legislative Representative. Richard Crouch, M.D., Farmington, Chairman of "Operation Hometown" of the Mineral Area Medical Society discussed this subject from a local viewpoint. Ralph Perry, M.D., Kansas City, Chairman, Missouri Medical Political Action Committee, discussed this subject as it relates to Missouri. Stanley S. Peterson, M.D., Springfield, MSMA representative on Missouri Kerr-Mills Advisory Committee, brought those in attendance up to date on the present status and functioning of Kerr-Mills in Missouri. Following the formal remarks of all speakers, Moderator Hector W. Benoit Jr., M.D., Kansas City, called for questions and general discussion from the floor—"and he got it." The final part of the program was climaxed by a luncheon and a summary of the conference by Leonard T. Furlow, M.D., President, MSMA. Seventy physicians representing various county medical societies over the state of Missouri attended the workshop. Approximately 100 people were present at the Saturday evening banquet and program.

Left to right, Frank Woolley, Jim Foristel, Speaker Tom Martin, Dr. Furlow and David Baldwin at head table.

On Sunday, August 9, the Butler-Ripley-Wayne County Medical Society sponsored a Conference on "Athletic Injuries" for coaches and physicians in southeast Missouri at the Holiday Inn, Poplar Bluff. This informative session ran from 10:00 a.m. to 3:00 p.m. The program was presented by Glenn McElroy, M.D., Columbia, Orthopedic Consultant at the University of Missouri Athletic Department, and Mr. Fred Wappel, Trainer, Athletic Department, University of Missouri. Dr. McElroy discussed the prevention and detection of head and neck injuries, shoulder injuries, knee and ankle injuries, soft tissue injuries, heat exhaustion and other subjects related to the proper conditioning and care of the athlete. Mr. Wappel presented demonstrations of the various subjects as they were being discussed by Dr. McElroy. This is the second annual conference of this type sponsored by the Butler-Ripley-Wayne County Medical Society and from all indications and comments, can certainly be considered a most worthwhile project.

On Wednesday evening, September 2, the St. Louis Medical Society will hold its Annual Athletic Injury Conference. Various demonstrations will be presented by Bob Bauman, Trainer, St. Louis Cardinals and St. Louis University Billikens, Bob Hickok, Physiotherapist, St. Louis Hawks, and Walter Eberhardt, Director of Physical Education, St. Louis University. A panel discussion on athletic injuries by coaches will be moderated by Bob Broeg, sports editor, *St. Louis Post-Dispatch*. Members of the panel will be: John Benington, Athletic Director, St. Louis University; Bob Gilker, Coach, St. Louis University Soccer Team; Harry Gallatin, Coach, St. Louis Hawks, and Wally Lemm, Coach, St. Louis Foot-

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*Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958.

Condition	No. of Patients	No. Cured with Signemycin
Abscess, pulmonary	17	16
Bronchiectasis	19	13
Bronchitis	286	267
Bronchopneumonia	192	179
Empyema	12	11
Pneumonia, lobar	150	146
Pneumonia, other febrile	160	150
Various infected pneumopathies	192	172
Totals	1,028	954 (92.8%)

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Brief Summary and Bibliography follow.

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ball Cardinals. Another panel discussion by physicians moderated by I. C. Middleman, M.D., will include Stanley L. London, Surgeon, St. Louis Hawks; Maurice B. Roche, M.D., Orthopedist; Arthur W. Neilson, M.D., Dermatologist and Frank Palazzo, M.D., Neurosurgeon. The new athletic rules for that area will also be discussed. The special guest speaker will be Stan Musial, Director of the President's Council on Physical Fitness and Vice President of the St. Louis Cardinals. Those attending the conference will be guests of the St. Louis Cardinals management at the St. Louis Cardinal vs. Milwaukee Braves game beginning at 8:00 that evening.

NEW MEMBERS

Calvin E. Engelmann, M.D., 7721 State Line, Kansas City, has become a member of Jackson County Medical Society. Dr. Engelmann is a native of Pawnee City, Neb., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1957. He specializes in surgery.

Ashford M. Galbreath, M.D., Professional Bldg., Kansas City, has become a member of Jackson County Medical Society. Dr. Galbreath is a native of Topeka, Kan., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1959. He specializes in internal medicine.

Robert J. Harris, M.D., 2008 Hazelwood Drive, Columbia, has become a member of Boone County Medical Society. Dr. Harris is a native of Poplar Bluff, Mo., received his preliminary education at Central College, and his M.D. degree at the University of Missouri in 1961. He specializes in pediatrics.

R. David Hinds, M.D., 2910 St. Marys Ave., Hannibal, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Hinds is a native of Springfield, Mo., received his preliminary education at Westminster College, and his M.D. degree at Missouri University in 1963. He specializes in general practice.

Sidlee W. Leeper, M.D., 1504 E. Broadway, Columbia, has become a member of Boone County Medical Society. Dr. Leeper is a native of St. Louis, received his preliminary education at the University of Missouri, and his M.D. degree at Harvard University in 1955. He specializes in internal medicine.

Roland E. Lohmar, M.D., 1501 West Blvd., Columbia, has become a member of Boone County Medical Society. Dr. Lohmar is a native of Marceline, Mo., received his preliminary education at the University of Kansas City, and his M.D. degree at the University of Missouri in 1960. He specializes in internal medicine.

Thomas A. Minetree, M.D., 623 W. Pine Blvd., Poplar Bluff, has become a member of Butler-Ripley-Wayne County Medical Society. Dr. Minetree is a native of Poplar Bluff, received his preliminary education at the University of Arkansas, and his M.D. degree at the University of Arkansas in 1959. He specializes in radiology.

Larry A. Ozenberger, M.D., 400 Clay Ave., Plattsburg, has become a member of Clinton County Medical Society. Dr. Ozenberger is a native of St. Joseph, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1963. He specializes in general practice.

DEATHS

Schmidt, Herbert H., M.D., Marthasville, a graduate of the University of Missouri, 1924; member of Franklin-Gasconade-Warren County Medical Society; aged 66; died July 4, 1964.

Zeinert, Oliver B., M.D., University City, a graduate of the University of Michigan, 1907; member of St. Louis Medical Society; aged 79; died July 7, 1964.

Sullivan, William J., Providence, R. I., a graduate of St. Louis University, 1929; member of North Central Counties Medical Society; aged 62; died July 8, 1964.

Dixon, Otto J., M.D., Kansas City, a graduate of the University of Kansas, 1916; member of Jackson County Medical Society; aged 72; died July 20, 1964.

Of 507 patients with confirmed ear, nose and throat infections... 465 or 91.7% were treated successfully with Signemycin®

Note:
Adams,* whose 50 patients included 20 with ENT infections, stated that Signemycin "was particularly valuable in infections that did not respond to other antimicrobial agents, and in patients to whom penicillin could not be given." All his cases responded within five days; in most patients, all signs of infection disappeared in three days.

*Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957.

Condition	No. of Patients	No. Cured with Signemycin
Otitis media	90	86
Pharyngitis and laryngitis	162	148
Sinusitis	68	55
Tonsillitis and peritonsillitis	163	153
Various	24	23
Totals	507	465 (91.7%)

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News—Personal and Professional

The department of rehabilitation at St. John's Hospital has appointed **Maurice B. Roches**, M.D., as medical director.

Recently **Robert W. Moellenhoff**, M.D., Washington, took the oath of office as coroner for Franklin County.

Washington University Medical Alumni Association recently elected **Ray D. Williams**, M.D., St. Louis, as president-elect. Dr. **Heinz Haffner**, St. Louis, was installed as president. Dr. **H. Rommel Hildreth** was elected vice president, and Dr. **Richard V. Bradley**, Clayton, was elected secretary-treasurer.

Recently elected chief of staff of the Lexington Memorial Hospital is Dr. **W. Wayne Bodston.**

The *St. Joseph News Press* carried a news story on the reply by **Thompson E. Potter**, M.D., St. Joseph, to statements made in July by Drew Pearson.

At a fall meeting of the American Association of Obstetricians and Gynecologists, **E. Lee Dorsett**, M.D., formerly of St. Louis, now of Indianola, Miss., was named one of thirteen honorary fellows of the United States and Canada. Among fellows of the organization are Drs. **G. D. Royston, Willard Allen, Axel Arneson, Joseph A. Hardy** and **Keith P. Russell.**

The American College of Chest Physicians elected **Alfred Goldman**, M.D., St. Louis, president at the recent meeting in San Francisco.

The Poplar Bluff Lions Club recently installed **B. M. McLain**, M.D., Poplar Bluff, as president of the club.

At a recent meeting of the American College of Chest Physicians, **Michael Bernreiter**, M.D., Kansas City, was a panel member of the Fireside Conference entitled "New Concepts in the Diagnosis and Treatment of Coronary Artery Disease."

The American Cancer Society announced recently that **James R. McVay**, M.D., Kansas City, had received a grant for a research project at St. Mary's Hospital, Kansas City.

Principal speaker at the Centennial Anniversary Commencement Exercises June 5 at the St. Louis College of Pharmacy was **David N. Kerr**, M.D., St. Louis.

An Award of Merit was presented to **William H. Olmsted**, M.D., St. Louis by Coe College, Cedar Rapids, Iowa, at commencement ceremonies on June 6.

The newly appointed chairman of the board of trustees of Drury College, Springfield, is **Frank McDowell**, M.D., St. Louis.

The College of American Pathologists has elected **Victor B. Buhler**, M.D., Kansas City, as president.

Certificates of merit were presented by the American Medical Association to **Robert E. Kuhlman**, M.D., and **Warren G. Stamp**, M.D., St. Louis, for designing an exhibit illustrating skeletal diseases.

Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®

Note:

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.[1-87]
In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

Condition	No. of Patients	No. Cured with Signemycin
Ear, nose and throat infections	507	465
Respiratory infections	1,028	954
Gastrointestinal infections	425	387
Genitourinary infections	748	684
Skin and soft-tissue infections	1,088	1,036
Bone and joint infections	71	64
Deep-seated or generalized infections	257	251
Obstetrical & gynecological infections	341	320
Miscellaneous conditions	592	570
Totals	5,057	4,731 (93.5%)

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Leonard T. Furlow, M.D.

President's Message

Now that the primaries are over, the candidates for various offices are known. While pre-primary work was important, it is even more essential now that members assess the attitudes of the candidates. From statements made by the candidates and from information available from other sources, it should not be difficult to determine which ones should be the choice of the medical profession.

We should work for those candidates who stand for free enterprise including a medical system which includes free choice of physicians. It is these candidates whom we should support personally, and whom we should advise our friends and patients to vote for. It should be remembered, also, that between now and November 3 MMPAC will be of great importance. It is hoped that every member of the Association will support our political arm, both by action and with financial contributions.

Leonard T. Furlow

EDITORIAL

THE RISE IN HOSPITAL COSTS

Hospital labor costs—the prime factor in rising hospital costs—have increased 545 per cent since World War II, the American Hospital Association reported early in August after its annual survey of the nation's hospitals.

Largely as a result of increased wage costs, the average cost to the hospital for each day a patient spends in the hospital has risen from $9.39 in 1946 to $38.91 in 1963, an increase of 314 per cent, the survey showed.

During this period, the total expense of an average stay in a hospital, slightly more than a week, increased from $85 to $298, the Association reported.

These labor and patient care cost averages are for nonfederal short term general hospitals registered by the Association, hospitals which admit patients with all types of illnesses or injuries. The 1963 survey, which covers 5,684 hospitals, appeared in the 1964 Guide Issue of *Hospitals*.

Several factors have caused the upsurge in labor costs, according to the director of the Association. "Hospitals are working to raise salaries of their personnel to levels comparable to other fields," he explained. "In addition, increased medical specialization and advanced technology have resulted in hospitals needing many more skilled, well-trained individuals who must be paid according to their abilities." Many hospital specialists and technicians today are performing jobs that were unknown 10 years ago but are commonplace now. At the same time, the public has increasingly turned to hospitals for more health care, adding to the demand for larger hospital staffs.

The survey shows that last year 241 employees were needed to care for every 100 patients in short term hospitals. In 1946, the ratio was 148 to 100 patients.

Nonfederal short term general hospitals employ almost 70 per cent of all hospital personnel in the United States, spend 69 per cent of all hospital dollars and have 64 per cent of all hospital assets, the survey shows.

In addition to the nonfederal short term general hospitals, the American Hospital Association survey covered 1,454 long term, federal and other types of hospitals. Total employment in all 7,138 hospitals registered by the AHA reached a record high of 1,840,287 in 1963. This is 77,330 more employees than in the previous year.

Total payroll expenses of these hospitals reached $7.3 billion in 1963, representing 66.3 per cent of the total budget of $10.9 billion expended by all hospitals. In 1946, all registered hospitals spent $1.1 billion on wages out of a total budget of $1.9 billion.

The two-thirds of the budget all hospitals earmarked for wages does not usually include fringe benefits such as health or retirement plans, social security and others which are budgeted separately for hospital personnel.

Labor is not the only reason however, for increased hospital costs, it was pointed out. Costly new equipment, new special services, and the public's demand for increased services and facilities have also contributed to the rise. Nonlabor costs have increased 425 per cent for nonfederal short term general hospitals since 1946 and by 328 for all hospitals.

Other statistics from the report showed:

Occupancy rates short term general hospitals reported a 76 per cent average occupancy rate in 1963, the highest level of patient utilization since the late 1940's.

Outpatient services showed that a total of 118,238,000 visits were made to all hospital outpatient facilities where patients are treated who do not require hospitalization. This service, the survey notes, is one of steady growth.

The number of births in hospitals continued to decline in 1963, reflecting a nationwide birth rate decrease. All hospitals reported 3,784,666 live births compared to 3,857,626 in 1962.

The nation's 543 psychiatric institutions reported 499,210 patient admissions in 1963 and an average daily census of 719,674 patients.

From the Medical Schools

WASHINGTON UNIVERSITY

Dr. Hugh Chaplin Jr. has been named director of the Irene Walter Johnson Institute of Rehabilitation at Washington University School of Medicine, St. Louis. Dr. Chaplin will retain his position as associate professor of medicine and preventive medicine.

Dr. Chaplin is the second director in the Institute's five year history. He succeeds Dr. Eric Reiss, who is now chief of medicine at Michael Reese Hospital, Chicago.

The Rehabilitation Institute provides physical, occupational, speech and vocational therapy to both hospitalized and out-patients of the Washington University Medical School and Associated Hospital medical center. In 1963 more than 1,200 individuals made 17,279 visits to the Institute for treatments ranging from a few days to as long as six months for hospitalization patients.

Dr. Chaplin has been a member of the Washington University School of Medicine faculty since 1955. He received his A.B. from Princeton University where he was named to Phi Beta Kappa and his M.D. from Columbia University College of Physicians and Surgeons where he was named to Alpha Omega Alpha.

At Washington University School of Medicine, Dr. Chaplin has served as associate dean and director of the Student Health Service. He spent 1962-1963 in London at the Wright-Fleming Institute of Microbiology as a fellow of the Commonwealth Fund. His research has centered around blood disease and blood chemistry.

The Irene Walter Johnson Institute of Rehabilitation opened in 1959. The building is named for the late Mrs. Irene Walter Johnson, principal donor of the funds. Mrs. Johnson was the widow of Oscar Johnson, president of International Shoe Company, St. Louis.

Dr. Arpad Csapo, recently appointed professor of obstetrics and gynecology at Washington University School of Medicine, St. Louis, will be awarded the biannual prize of De Snoo-van't Hoogerhuys Stichting, a Dutch foundation which recognizes outstanding work "in the field of reproduction in its broadest sense." Dr. Csapo, the first non-Dutch scientist to be honored, will receive the prize at a meeting of the Dutch Gynecological Society in the fall in Utrecht.

Dr. Csapo was associated with the Rockefeller Institute since 1956 and was head of the Laboratory of Physiology of Reproduction. Last year, he received a Career Research Award from the U. S. Public Health Service.

At Washington University, Dr. Csapo will continue his study of the mechanism of the maintenance of pregnancy and the onset of labor. He will also continue his work at the University of Bahi, Brazil, where he is a professor honoris causa.

Grants

More than $2 million has been awarded to Washington University School of Medicine by the United States Public Health Service recently. Of that total, more than $1,400,000 is for training programs. The remaining $880,824 has been awarded for research projects.

New research grants total $134,386. The largest grant has been awarded to Dr. Girgis Mikhail, instructor in obstetrics and gynecology. He received $33,326 for a study of steroids associated with the human ovary. Dr. Mikhail will make a comprehensive analysis of steroids secreted by the human overy in the various stages of the menstrual cycle. This understanding of ovarian activities may help to explain some aspects of the mechanism of ovulation.

Dr. Blake Moore, research assistant professor of biochemistry in psychiatry, received $27,767 to study proteins which are connected with the unique functions of brain cells.

Dr. Warren G. Stamp, associate professor of orthopedic surgery, received $22,310 for the continuation of his investigation of enzymes and substrates use in muscle. Dr. Stamp will modify for use with muscle the technic developed by Dr. Oliver Lowry, professor of pharmacology, for measuring quantities as small as a single cell.

A grant of $20,972 has been awarded to Dr. Kirk Osterland, assistant professor of medicine and preventive medicine. Dr. Osterland is studying the properties of high molecular weight antibodies found in cases of rheumatoid arthritis and some blood-cell destroying diseases in an

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effort to better understand their possible relationship to disease states.

With a $20,853 grant, Dr. William E. Edmonston Jr., assistant professor of medical psychology, hopes to discover if hypnotic amnesia and hypnotic age-regression have associated physiological changes. This physiological study can have direct meaning for the processes of forgetting, positive learning, thinking and memory.

Dr. Mark A. Stewart, department of psychiatry, received a $6,000 grant for the study of carbohydrate metabolism, nerve and developing brain. Dr. Stewart's research is concerned with the origin of enzymes in the nervous system and the enzyme changes during development.

Dr. Joyce G. Small, assistant professor of psychiatry, received a $3,259 research grant for the study of psychiatric patients with epilepsy. Dr. Small is interested in finding if there is any association between mental illness and certain types of epilepsy.

Radiation dosage determination is being studied by Dr. William E. Powers, associate professor of radiology at Washington University School of Medicine, with the aid of a plastic phantom. Aim of the project is to establish a quick and accurate method of computing dosage when more than one type of therapy is used or when it is applied from several angles or rotated. The plastic man is an accurate representation of the body's density.

Faculty Foreign Travels

Dr. Harvey R. Bernard, associate professor of surgery at Washington University School of Medicine, St. Louis, is spending a sabbatical year at St. Bartholomew's Hospital, London, England, studying the epidemiology of surgical infections.

Dr. Justin J. Cordonnier, professor of urology, attended the Canadian Urological meeting in Vancouver, British Columbia, and the meeting of the Societe Internationale D'Urologie in London.

Dr. E. James Anthony, professor of child psychiatry, attended the meeting of the Executive Committee of the International Congress in Child Psychiatry held in London. Dr. Anthony presented a paper, "The Influence of Psychosis on Family Life," to the study group of the World Federation of Mental Health in Geneva, Switzerland. He also was the speaker at the plenary session of the International Congress of Psychotherapy in London.

Drs. Samuel B. Guze, Eli Robins, Lee Robins, John Stern, George Winokur and Miss Beulah Morris, members of the department of psychiatry, attended the First International Congress of Social Psychiatry in London.

Drs. Oliver H. Lowry and David B. McDougal Jr., department of pharmacology, attended the Second International Congress for Histochemistry in Frankfurt, Germany.

Dr. Carl V. Moore, head of the Department of Internal Medicine, and Dr. Sol Sherry, professor of medicine, attended the Tenth International Congress of Hematology in Stockholm, Sweden. Dr. Moore presented a lecture on "Nutrition and Iron Deficiency." Dr. Sherry presented a lecture on "Present Concept of the Fibrinolytic System." Dr. Moore was recently named to the dual position of Vice-chancellor for Medical Affairs and president of the Washington University School of Medicine and Associated Hospitals medical center.

Dr. William Sleator, associate professor of biophysics in physiology, was present at the International Biophysics Congress meeting in Paris.

Dr. Michel M. Ter-Pogossian, professor of radiophysics, attended the International Atomic Energy Agency Symposium on "Medical Radioisotope Scanning" in Athens, Greece. At the meeting, Dr. Ter-Pogossian presented a paper, "Autofluorography with an X-ray Image Amplifier." John O. Eichling was co-author.

SAINT LOUIS UNIVERSITY

Dr. Robert Hanna Felix, director of the National Institute of Mental Health of the National Institutes of Health, and Assistant Surgeon General of the United States, has been appointed dean of the School of Medicine of St. Louis Uni-

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Robert H. Felix, M.D.

versity, it has been announced by the Very Rev. Paul C. Reinert, S.J., University president.

Dr. Felix, who has been associated with the U. S. Public Health Service for 31 years, will assume the deanship about October 1, succeeding Dr. G. O. Broun Sr., who has served since January 1962. Dr. Felix also will serve as professor of psychiatry.

Dr. Broun, who will observe his fortieth anniversary on the faculty of the St. Louis University School of Medicine in September, will resume his teaching and research in the field of virology in the department of medicine.

"St. Louis University is deeply grateful to Dr. Broun," Father Reinert said. "While serving as dean, during an interim period, he not only has moved the school forward, but participated in a painstaking search for his successor. The appointment of Dr. Felix demonstrates that this search has been eminently successful."

The Rev. Edward J. Drummond, S.J., Vice President for the University's Medical Center, described Dr. Felix as "an experienced and dynamic administrator with a broad understanding of and a deep personal commitment to medical education. His professional abilities and his national stature will provide the School of Medicine with the continuing leadership required to develop along the lines it has planned. I am deeply pleased that Dr. Felix is coming to St. Louis University.

"Dr. Broun, who accepted the deanship in 1962 with the understanding that it be for a limited term, has done great work for the school during his tenure of office. All of us are happy that he will continue on the faculty. He is an educator and administrator to whom we look with pride and gratitude."

Dr. Felix has been director of the National Institute of Mental Health since 1949 and Assistant Surgeon General since 1957.

He began his career with the U. S. Public Health Service in 1933, as assistant surgeon at the Medical Center for Federal Prisoners in Springfield, Mo. He was named clinical director there in 1935.

In 1937, he was appointed chief of psychiatric service at the Public Health Service Hospital in Lexington, Ky., a federal institution for research and treatment of narcotic addiction. He became clinical director in 1938 and executive officer in 1939.

He was assigned to the U. S. Coast Guard Academy in New London, Conn., as a psychiatrist in 1942, and promoted to senior medical officer in 1943. The next year, he was appointed assistant chief of the hospital division of the Bureau of Medical Services in Washington, D. C., where he also served as chief of the Division of Mental Hygiene until 1949

Dr. Felix is a fellow and former president of the American Psychiatric Association, and has held a number of offices in the Association since 1945. He served as president in 1960. The Association made him a certified mental hospital administrator in 1954.

He is a fellow of the American Public Health Association, and has served on its governing council and its committee on professional education.

He has been professor of clinical psychiatry and a special lecturer at the Georgetown University School of Medicine in Washington, D. C., since 1947.

Dr. Felix holds five honorary degrees, including a doctor of science degree awarded by the University of Rochester in June. The University of Colorado and Boston University awarded him honorary doctor of science degrees in 1953; the University of Chattanooga, doctor of laws degree, 1957, and Ripon College, Ripon, Wis., doctor of laws degree, 1959.

He received the Rockefeller Public Service Award in 1951, and last year was awarded the Salmon Medal by the New York Academy of Medicine. It was the fourth medal in 30 years to be awarded by the Academy. In June he received the annual award of the National Conference on Social Welfare for contributions to social welfare through mental health. Other awards received last year included the Strecker Medal and Nolar D. C. Lewis Award.

Dr. Felix attended the University of Colorado

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from 1922 to 1926, and received the M.D. degree in 1931 from the University of Colorado.

He took his internship at Colorado General Hospital and was a Commonwealth Fund Fellow in Psychiatry at Colorado Psychopathic Hospital from 1931 to 1933. He received the Master in Public Health degree from The Johns Hopkins University School of Hygiene and Public Health in 1942, having been a Rockefeller Fellow in Public Health there. He took postdoctoral studies at the Washington Psychoanalytic Institute from 1949 to 1955.

He is a Fellow of the American Medical Association, American College of Physicians, American Psychiatric Association and American Public Health Association. He is a member of the District of Columbia Advisory Committee to Division of Legal Psychiatry, Canadian Psychiatric Association, Southern Psychiatric Association, of which he was president in 1946, and the Washington Psychoanalytic Society. He is a corresponding fellow of the Royal Medical Psychological Association, and a member of many professional organizations.

Virology Institute Established

An Institute for Molecular Virology has been established at the Saint Louis University Medical Center, it has been announced by the Rev. Edward J. Drummond, S.J., Vice President for the Medical Center. Dr. Maurice Green, professor of microbiology at the Saint Louis University School of Medicine, has been named director of the Institute. Dr. Green holds a life time Research Career Award from the National Institute of Health.

The major program of the Institute will be the isolation and purification of cancer producing and noncancer producing human viruses and studies of their molecular structure.

The Institute will be housed in a building at Spring and Park Avenues formerly used as a training school by the Public Service Company. The structure is currently being renovated for December 1964 occupancy by Dr. Green and his research staff.

Father Drummond said that funds totaling more than a half a million dollars received from National Institutes of Health grants and contracts to Dr. Green, and University contributions will be used to build and equip the research laboratories in the new facility. The Institute was created as a result of the recent emergence of molecular virology as a major approach to the study of cell biochemistry, genetics and cancer, he said.

Dr. Green stated that major breakthroughs in the molecular foundations of biology made by microbiologists, biochemists and biologists within recent years hold promise of pointing the way to greater understanding of the differences in the biological and pathogenic potentialities of viral agents based on their physical and chemical structure.

In addition to the Institute's primary function of fundamental research in the areas of molecular virology and cancer, it will have a major responsibility for the teaching of graduate students, medical students and postdoctoral fellows in virology and molecular biology, and for the training of scientists in new research approaches.

The Institute will be staffed with 20 pepole, including three new medical faculty appointees. Researchers trained in the fields of biochemistry, virology, physical chemistry and pathology will be recruited for the multidisciplinary program.

Dr. Green summarized the scope and function of the new Institute when he said that a modern medical research institute housing the latest equipment and facilities and staffed by personnel trained in the various disciplines of medical science provides the ideal situation in which to pursue solutions to the problems still unsolved by modern medicine.

UNIVERSITY OF MISSOURI

Leaves of Absence

Dr. Constantine Anast, associate professor in the Department of Pediatrics, will begin his leave of absence September 1, 1964, to investigation work in magnesium metabolism in the laboratory of Dr. Howard Rasmussin in the Department of Biochemistry at the University of Wisconsin. Dr. Anast will return to the University of Missouri August 31, 1965.

University Hospital Appointments

Two appointments at the St. Louis University Hospitals have been announced by John B. Warner Jr., Director. Mr. John J. Hayes, former Director of the Department of Medical Services for the Government of Guam, has been named associate director of University Hospitals. He will assist in planning the continued expansion of the services of Firmin Desloge Hospital and David P. Wohl Memorial Mental Health Institute.

Mr. Hayes was appointed Director of the Department of Medical Services by the former Governor Bill Daniel of Guam in 1962, remaining there until recently. During his two years' stay

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in Guam, he was responsible for the Public Health and Welfare program and the administration of Guam Memorial Hospital, a 300 bed institution.

While in Guam, he recruited and organized a staff of qualified physicians in 10 major speciality fields to staff the $7,000,000 hospital which served the health needs of a civilian population of 47,000 people. In 1962, a typhoon damaged the hospital's facilities so it was inoperable. Mr. Hayes directed the rebuilding of the institution with funds made available by the Office of Emergency Planning of the President of the United States.

Mr. Hayes received the bachelor of science degree in education from the University of Missouri in 1954 and the master in hospital administration degree from Washington University in 1956.

He took his residency in Hospital Administration at the Veterans Administration Hospital in Houston, which is part of the affiliated residency program at Baylor University.

Mr. Hayes begin his career as assistant administrator at St. Mary's Infirmary in Galveston in 1956 and associate director in 1958. In 1959, he was appointed administrator of the Hedgecroft Hospital in Houston, remaining there for three and a half years. During this period, he converted the hospital from a physical rehabilitation institution to a psychiatric hospital. While in Houston, he was guest lecturer and preceptor in hospital administration for a joint program sponsored by the United States Army Air Force and Baylor University.

Miss Frieda M. Brackebusch, associate professor of social service at the University, has been appointed Director of Social Service at the St. Louis University Hospitals. Miss Brackebusch's major responsibility will be to direct the Department of Social Service and its clinical teaching program at Firmin Desloge Hospital and the David P. Wohl Memorial Mental Health Institute. She will retain the rank of associate professor at the University's School of Social Service.

In 1962, Miss Brackebusch was released from her regular responsibilities at the School of Social Service on a temporary loan basis, and was named to initiate the Social Service Department at the University Hospitals.

One of her first responsibilities was the recruitment of trained social workers for the University Hospitals. Miss Brackebusch also developed a training program for graduate students in social work at the University, as well as assisting junior and senior medical students who rotate through the University Hospitals for clinical studies.

Miss Brackebusch has had wide experience in community organization as well as administrative experience in the direction of social service departments and agency programs.

Founders Week

Medical alumni are invited to attend annual alumni activities in St. Louis during Founders Week to be celebrated by St. Louis University October 22 to 26.

A dean's reception will be held for alumni from 4:00 p.m. to 6:00 p.m. Thursday, October 22, in Miller Hall of Firmin Desloge Hospital, 1325 S. Grand Blvd.

A day-long program is scheduled for medical alumni Friday, October 23. An 8:00 a.m. Mass in the Desloge Hospital Chapel will be followed by breakfast in the Desloge Cafeteria of the hospital. A clinical academic program will be held in Miller Hall from 9:00 a.m. to 12:00 noon that day. A dean's luncheon will be held at 12:15 p.m. in the Desloge Cafeteria. A cocktail and dinner party for reunion classes is planned from 4:00 to 9:00 p.m. that evening at the Three Fountains Restaurant located in Gas Light Square. Classes celebrating anniversaries are graduates of 1914, 1919, 1924, 1929, 1934, 1939, 1944, 1949, 1954 and 1959.

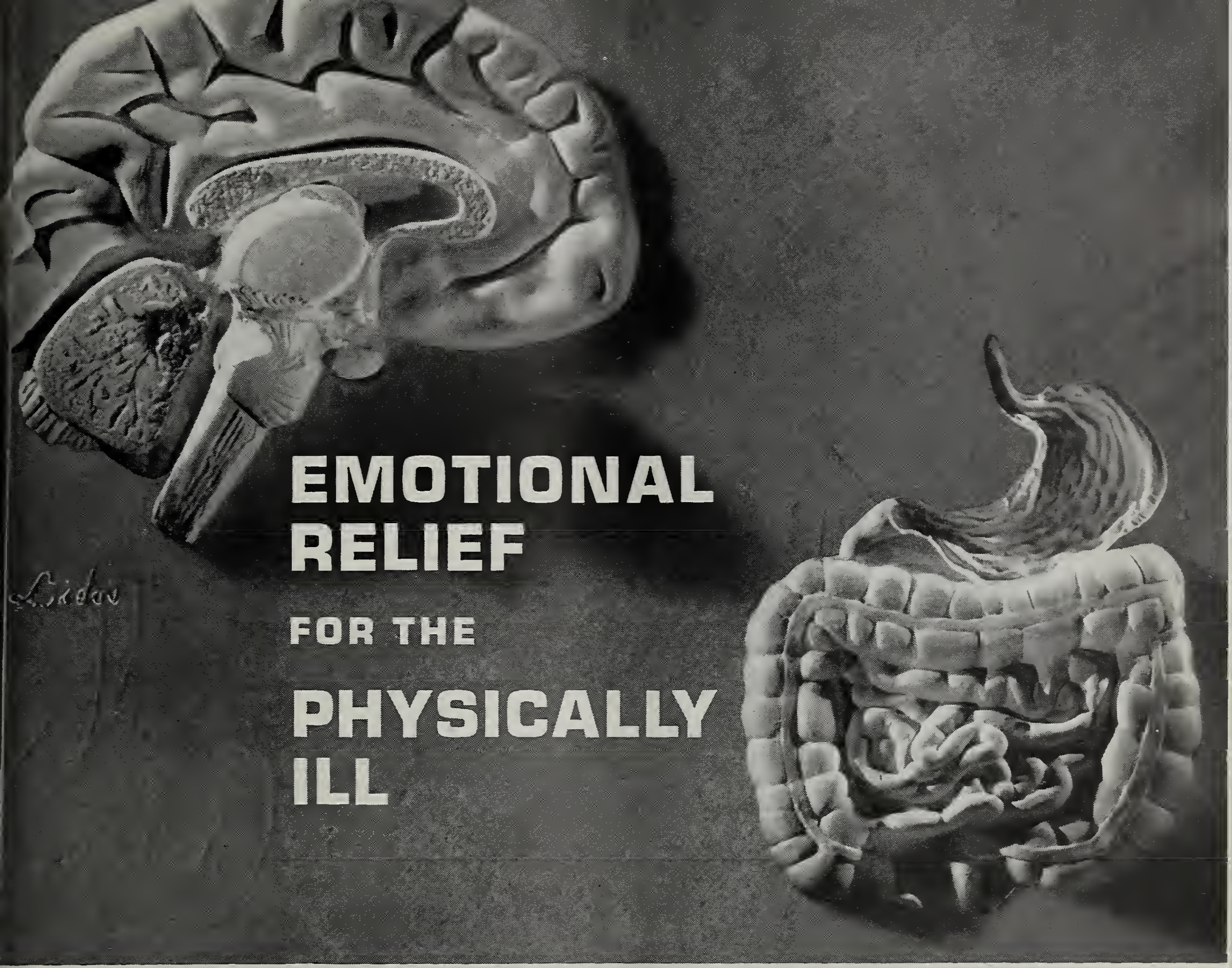
All medical alumni are invited to an alumni President's reception and dinner to begin at 6:00 p.m. Saturday, October 24 at Norwood Hills Country Club. Reservations may be made by writing William C. Trigg Jr., Executive Secretary, Medical Alumni Association, Saint Louis University.

Dr. Fernando Tapia, associate professor of psychiatry and chief of the section of Child Psychiatry, left the University of Missouri Medical Center on June 30, 1964, for a year's leave of absence. During the leave Dr. Tapia will be at State University of Iowa, Iowa City, working with Dr. Richard Jenkins, head of the Section of Child Psychiatry. The object of the trip is to conduct special advanced studies in the management and treatment of hospitalized, emotionally disturbed children.

Trips and Talks

Dr. James A. Green, associate professor of anatomy, attended the annual meeting of the Endocrine Society in San Francisco on June 18 through 20. Approximately 1,200 endocrinologists attended the meeting.

Dr. Frank B. Engley Jr., professor and chairman of the Department of Microbiology, attended the National Medical Technology meeting in Kansas City on June 16 and 17. He also attended a meeting of the Executive Board of Missouri Public Health Association on June 18.



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Dr. Engley participated in a panel on the teaching of microbiology at a conference on "History of Microbiology" at Indiana University in Bloomington, Ind., on June 29 through July 3. The meeting was sponsored by the National Science Foundation at Indiana University.

Dr. Herbert S. Goldberg, professor of microbiology, visited with representatives of Mallinckrodt Pharmaceutical Company on the University of Missouri campus and discussions were held on continuation of the Mallinckrodt Microbiology Research Fellowship with Dr. D. Baeder, Director of Biological Sciences. Dr. Goldberg presented a lecture July 2 at Stephens College on "Antimetabolites" to National Science Foundation Summer Institute of High School Biology Teachers. Approximately 30 teachers attended the meeting.

Dr. Lane A. Reeves, resident physician in the Department of Obstetrics and Gynecology, attended an Institute on Developmental Biology at the National Institute of Health, Madison, Wis., June 21 through 28.

Dr. Kenneth K. Keown, professor of anesthesiology, and Dr. G. W. N. Eggers Jr., associate professor of anesthesiology, attended the American Medical Association meeting in San Francisco, Calif., June 21 through 25. Dr. Keown was the coordinating secretary for a joint meeting with the Sections on Anesthesiology, Diseases of the Chest, Experimental Medicine and Therapeutics, General Practice and Internal Medicine entitled "Symposium on Hyperbaric Oxygen Phenomena." Dr. Keown was also elected chairman of the Section on Anesthesiology of the American Medical Association. On June 18 and 19 Dr. Keown and Dr. Eggers were guest examiners for the American College of Anesthesiologists at a meeting sponsored by that organization in San Francisco.

Dr. M. S. De Weese, professor and chairman of the Department of Surgery, and Dr. W. F. Keitzer, University of Michigan, presented a paper entitled "Hemodynamic Mechanism for Pulse Changes Seen in Occlusive Vascular Disease" at the 18th annual meeting of the Society for Vascular Surgery in San Francisco on June 21. Dr. DeWeese joined the staff at the University of Missouri Medical Center on July 1 and Dr. Keitzer will join the staff in September, 1964, as an instructor in general surgery. Dr. Keitzer is now on the staff of the University of Michigan.

ELLIS FISCHEL STATE CANCER HOSPITAL

Dr. William Donegan joined the staff of the Ellis Fischel State Cancer Hospital as assistant

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surgeon on July 1, 1964. Dr. Donegan received his B.A. magna cum laude from Yale in 1955 and his M.D. from Yale in 1959. He is a member of Phi Beta Kappa. He received his postgraduate surgical training at Barnes Hospital and at the Ellis Fischel State Cancer Hospital. He will be working on the biostatistics of mammary cancer and the prevention of recurrent cancer on the chest wall after radical mastectomy.

The senior resident surgeons at the Ellis Fischel State Cancer Hospital for the coming year will be Drs. Ronald Turner and Andrew Walker. Dr. Turner graduated from St. Louis University in 1959 and Dr. Walker from Vanderbilt in 1960.

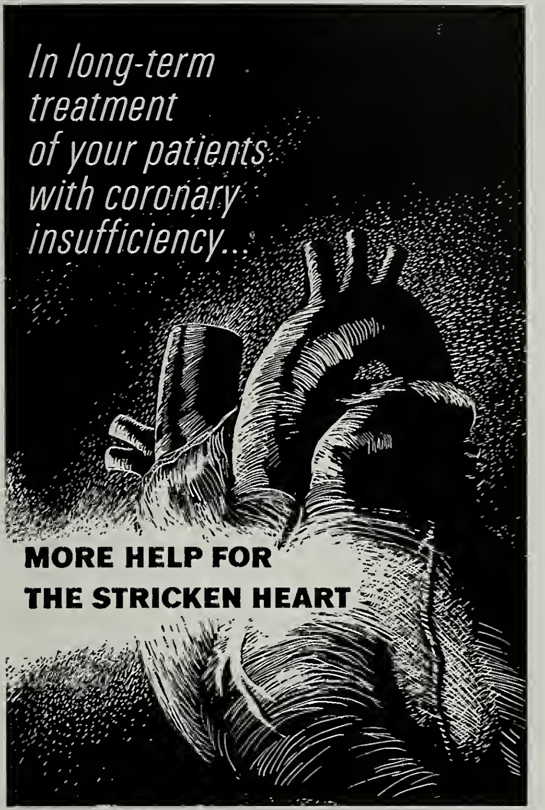
Dr. Robert Glass has been appointed attending surgeon. His area of research will be on the behavior and treatment of cancer of the skin.

The COSTEP (Commissioned Officers Student Training and Extern Program) is now in its third summer at Ellis Fischel State Cancer Hospital. The following medical students have summer clerkships at the Ellis Fischel State Cancer Hospital through COSTEP: David A. Spence, Western Reserve School of Medicine, Cleveland; Richard B. Yules, Yale University, New Haven, Conn.; Robert M. Adams, University of Oklahoma Medical School, Oklahoma City, and Barbara R. Seligman, University of Miami Medical School, Coral Gables, Fla.

The following medical students from the University of Missouri will be taking elective clerkships at the Ellis Fischel State Cancer Hospital during the coming year: Gary B. Robnett, Harry N. Grannemann, Jerry Ragland, E. John Weidmaier, Jack R. Collins and Jack E. Weigle.

In response to a great demand for information concerning the health effects of cigarettes, Dr. A. McChesney Evans, Chief of Internal Medicine at the Ellis Fischel State Cancer Hospital, has given an illustrated lecture entitled "Smoking and Health, the Story Behind the Surgeon General's Report" to the following groups in Columbia from May to July: Kiwanis Club, Rotary Club, Little Dixie Kiwanis Club, Cosmopolitan Club, Symposium on Molecular Biology (National Science Foundation) at Stephens College, the Industrial Education Seminar at Missouri University, Hickman High School, West Junior High School and Jefferson Junior High School.

From 1:30 p.m. to 4:30 p.m., Symposium on Current Concepts in the Use of Hormones. The speakers and subjects are: Robert W. Kistner, M.D., Associate Professor of Obstetrics and Gynecology, Harvard Medical School, Brookline, Mass., "The Use of Synthetic Progestogens in the Office Practice of Gynecology," and "Induction of Ovulation with Clomid." Willard M. Allen, M.D., Professor and Head of the Depart-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ment of Obstetrics and Gynecology, Washington University Medical School, St. Louis, "The Use of Long Term Estrogens for Females." Jack Zuckner, M.D., Director, Section on Arthritis, St. Louis University School of Medicine, St. Louis, "The Use of Steroids in the Treatment of Arthritis." Albert Segaloff, M.D., Associate Professor of Medicine, Alton Ochsner Medical Foundation, New Orleans, La., "Hormones as Antitumor Agents" and "Current Therapy of Thyroid Disease."

Following each symposium there will be a panel discussion on questions submitted by the audience with the symposium speakers participating. Specified times will be set aside during the two day program for visiting the many fine technical exhibits.

On Saturday evening at 7:30 p.m., the Annual President's Installation Banquet will be held. Dr. Edson C. Carrier, Kansas City, the outgoing President, will install the incoming President, Dr. Doyle C. McCraw, Bolivar, on that occasion. The featured banquet speaker will be Richard C. Bates, M.D., F.A.C.P., Lansing, Mich., who will discuss, "How to Have a Heart Attack."

Members of the Local Arrangements Committee are: Charles Nester, M.D., Barney Finkel, M.D., Wilbur Mullarky, M.D. and Lois Wyatt, M.D.

The Cancer Research Center, Columbia, Missouri, has received a grant for $1,646,000 from the National Cancer Institute, to establis a cancer clinical research center. A statistical research unit and a number of other projects in clinical and basic sciences will be supported by this five year grant.

The *St. Joseph News Press* carried a news story on the reply made by **Thompson E. Potter,** M.D., the National Cancer Institute, to establish a can-

The center will be located on the grounds of the Ellis Fischel State Cancer Hospital. The statistical research unit will begin work immediately reviewing the unique reservoir of biostatistical data at the Ellis Fischel State Cancer Hospital. The hospital has records on 33,000 different cancer cases with a 100 per cent follow-up accumulated during 25 years.

Dr. John S. Spratt Jr., Chief Surgeon at the Ellis Fischel State Cancer Hospital, and Dr. Bertis A. Westfall, Chairman and Professor of Pharmacology and Physiology at the University of Missouri, will be co-directors of the grant.

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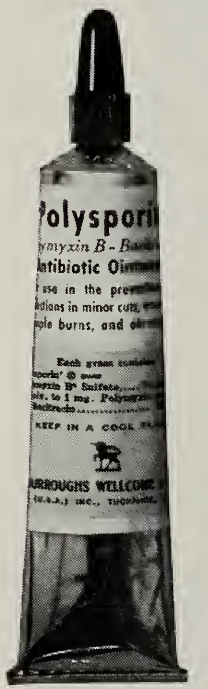

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Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet. Colored illustrations will be used when suitable if author assumes the actual cost.

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WASHINGTON

SOCIAL SECURITY AMENDMENTS OF 1964

The Senate on September 3 for the first time in history, adopted a compulsory health program, patterned after the King-Anderson bill. The bill would be financed by Social Security taxes, administered by the Secretary of HEW, under which all individuals over age 65 could receive benefits including up to 90 days of inpatient hospitalization in semiprivate accommodations subject to a deductible of $10 for each of the first nine days of hospitalization (minimum deductible: $20); skilled nursing facility services for up to 60 days in a hospital-affiliated institution upon transfer from a hospital for further treatment; home health services up to a maximum of 240 visits during a calendar year; and outpatient hospital diagnostic services during a period of 30 consecutive days subject to a deductible of $20.

Persons becoming 65 in 1968 or thereafter would have to have three quarters of Social Security or Railroad Retirement coverage for each year elapsing after 1965 to be eligible for the benefits.

Eligible individuals could elect a hospitalization plan, in lieu of the 90-day plan, which would provide 180 days of inpatient hospitalization subject to a deductible; or 45 days of such services without a deductible. Failure to make an election within a specified period would be deemed to be an election of the 90-day, $90 deductible plan.

After 1968, if the average per diem rate for hospitals increases and the wage base on which Social Security taxes are paid is not increased, all beneficiaries would be required to pay a deductible for each day of hospitalization.

Insurance companies would be granted exemption from the antitrust laws to form either a national or regional nonprofit association to sell health insurance benefits which are supplementary to the above benefits.

Cash benefits for all Social Security beneficiaries would be increased. The minimum benefit would be raised from $40 to $47, and the maximum benefit, from $127 to $134. The minimum family benefit would be increased from $60 to $70.50; the maximum family benefit, from $254 to $286.80.

Effective January 1, 1965, the wage base subject to Social Security taxes would be increased from $4800 to $5600.

The maximum individual benefit for those paying taxes on $5600 would be increased from $127 to $148 per month, and the maximum family benefit, from $254 to $312.

The Social Security tax rate on the new wage base would be increased. In 1965, the tax paid by employees and employers each would be increased from the present $174 per year (3.625 per cent) to $238 (4.25 per cent). The tax on a self-employed individual would be increased from $259.20 (5.4 per cent) to $358.40 (6.4 per cent). In 1971 and thereafter, the tax on the employee and employer each would be increased from the presently scheduled $222 per year (4.625 per cent) to $291.20 (5.2 per cent). The presently scheduled tax of $331.20 (6.9 per cent) on self-employed individuals would be increased to $436.80 (7.8 per cent).

In order to improve the actuarial status of the Disability Insurance Trust Fund, an additional portion of the Social Security tax collections would be transferred to it.

The Missouri Senators, Symington and Long, voted for the bill.

AMA PRESIDENT DIES

Norman A. Welch, M.D., President of the American Medical Association, died September 3 in St. John's Hospital in Jackson, Wyoming. Doctor Welch was at Jackson Park Lodge, Moran, Wyoming, to address a dinner meeting of the Wyoming State Medical Society when he was stricken with a massive cerebral hemorrhage. . . . The 62-year-old Boston internist was AMA's 118th President and had assumed this office on June 23, 1964, following a year of service as President-Elect. He was a member of the AMA House of Delegates for 12 years, serving as its Speaker from 1959 to 1963. . . . Doctor Welch was graduated from Tufts College and Tufts Medical School in 1926. Doctor Welch was also a consultant physician to five Massachusetts hospitals and served as President of the Massachusetts Medical Service (Blue Shield) from 1950 to 1963 and Chairman of the National Blue Shield Commission, 1955-1958. Doctor Welch has been Past-President of the Council of the New England Medical Society and a member and chairman of a Massachusetts Approving Authority for Nurses and Attendant Nurses Training Schools.

In addition to his widow, Doctor Welch is survived by four married daughters: Katherine,

(Continued on page 834)

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Across
Missouri

Proctor N. Carter, Director of the State Division of Welfare, on August 7 announced an expansion of the list of prescribed drugs for Old Age Assistance and Disabled persons, paid for by the State, by the addition of 51 new drugs. Included in the new list are drugs for the treatment of diseases of the eye and arthritis. Other diseases covered by the drug list, which now totals 83 drugs, include diabetes, epilepsy, diseases of the heart, diseases of the urinary tract, drugs for pain, tranquilizing drugs, and drugs used for the treatment of respiratory diseases. "Our drug list now covers almost all diseases common to aged persons and the disabled," Carter said.

The Division of Welfare sets prices that it will pay for the drugs and, in addition, pays the pharmacist or physician who dispenses drugs, $1.00 for each prescription filled. Under the expanded program announced, the druggist or dispensing physician will receive an additional 10 cents to cover the cost of the container. Another change would set a limit of 30 days' supply of medicine as a maximum. Previously, the maximum has been 90 days. Carter explained that his Advisory Committee felt that a 90 day supply is unnecessary, and in some instances, might be misused.

Carter said he was pleased with the cooperation received from the druggists throughout the state, and members of the medical profession. "At the present time there are nearly 900 drugstores participating in the program," he said.

The drug program was approved by the last General Assembly, which also approved a program of dental care for Old Age Assistance recipients and persons on disability rolls. About 850 dentists have signed agreements with the Division of Welfare and are participating in the program. Under the dental program, almost every type of dental service is available, with the exception of the purchase of new dentures. "We are going to see how our appropriations hold out before expanding the program to include purchase of dentures. I hope we will be able to do so," he said.

Carter said his office is being guided in the administration of the programs by a 13 member Advisory Committee, which was authorized by the Legislature. The Committee includes representatives of the State Medical Association; the State Osteopathic Association; the State Hospital Association; the State Pharmaceutical Association; the State Dental Association; and five members of the Legislature, including Senator Albert M. Spradling, President Pro Tem; Senator William Cason, Chairman of the Senate Committee on Public Health and Welfare; Senator Thomas Woolsey; Representative Stephen Lincoln, Harrison County; Representative Luna Butler, Gentry County. The Legislature appropriated $3,200,000 in State and Federal funds for the Drug Program, and $800,000 in State and Federal funds for the Dental Program, for the biennial period ending June 30, 1965.

WASHINGTON

(Continued from page 832)

Jane, Mary, and Sarah, and a son, Norman, Jr. Funeral services were held September 8 at St. Theresa's Catholic Church in the Boston suburb of West Roxbury, Massachusetts.

Doctor Welch will be succeeded as President of the American Medical Association by Donovan F. Ward, M.D., Dubuque, Iowa, who is President Elect. Doctor Ward will serve as President until the AMA Annual Meeting in June 1965. A new President-Elect will be selected by the AMA's House of Delegates during its Clinical Meeting in Miami Beach, November 29-December 2, 1964.

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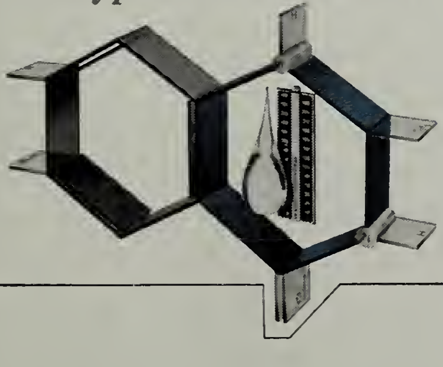

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CONTRAINDICATION: Anuria.

1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. J. Amer. Geriat. Soc. 11:945 (Oct.) 1963.

2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

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PROGRAM

Saturday, October 31 (Daylight Saving Time)

9:00 a.m. (DST) Business Session.

SYMPOSIUM ON ALLERGY

10:00 a.m. **The Management of Hay Fever**, Haddon Carryer, M.D., Mayo Clinic, Rochester, Minn.

10:20 a.m. **Intrinsic Bronchial Asthma**, Harry L. Alexander, M.D., St. Louis, Professor Emeritus of Clinical Medicine, Washington University School of Medicine.

10:40 a.m. Intermission to View Exhibits.

11:10 a.m. **Practical Approaches to Diagnosis and Therapy in Pediatric Allergy**, Donald L. Thurston, M.D., St. Louis, Associate Professor of Pediatrics, Washington University School of Medicine.

11:30 a.m. **The Management of Status Asthmaticus**, Haddon Carryer, M.D., Rochester.

11:50 a.m. **Panel Discusson on Allergy.**

12:30 p.m. Lunch and Exhibits.

SYMPOSIUM ON PEDIATRICS

2:00 p.m. **The Effect of Maternal Environment on Normal and Abnormal Embryonic Development**, Robert L. Brent, M.D., Philadelphia, Professor of Pediatrics and Radiology, Director, Eleanor Roosevelt Cancer Research Institute, Jefferson Medical College of Philadelphia.

2:20 p.m. **Recognition of Hidden Metabolic and Neurological Defects in the Newborn**, Herbert J. Grossman, M.D., Chicago, Director, Illinois State Pediatric Institute and Professor of Pediatrics, University of Illinois College of Medicine, Chicago.

2:40 p.m. **Recognition of Heart Disease in Children**, Carl Marienfeld, M.D., Columbia, Professor and Chairman, Department of Community Health and Medical Practice and Medical Director of Crippled Children Service, University of Missouri Medical School.

3:00 p.m. Intermission to View Exhibits.

3:30 p.m. **Immunization:** ***Newer Concepts,*** C. Read Boles, M.D., St. Louis, Instructor in Clinical Pediatrics, Washington University School of Medicine.

3:50 p.m. **Respiratory Distress Syndrome in the Newborn**, Robert L. Brent, M.D., Philadelphia.

4:10 p.m. **Diagnosis and Treatment of Convulsive Disorders**, Herbert J. Grossman, M.D., Chicago.

4:30 p.m. **Panel Discussion on Pediatrics.**

PRESIDENT'S INSTALLATION BANQUET

7:30 p.m. **President's Installation Banquet.** ***How to Have a Heart Attack,*** Richard C. Bates, M.D., Lansing, Michigan.

(Continued on page 886)

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Woman's Auxiliary

I am sure you will all understand when I say that this is one of the most difficult articles I have ever attempted to write—and many months before I had intended doing it.

I know you are still grieving with me over the tragic loss of our beloved President, Bitsy Calkins, and that you will be patient and understanding with me as I attempt to pick up the pieces and carry on her year. I know this because of many wonderful letters I have received from you, pledging your loyalty and cooperation, and from the many things some of you have already done to pave my rugged path. Thank you from the depths of my heart!

Mrs. R. W. Bohnsack

By the time you will read this, I shall have attended the National Fall Conference at the Drake Hotel in Chicago, and I hope to have many things to tell you at our own Fall Conference which will be of great value in your year's programs.

I am sure by now that you must have your reservations in for our Fall Conference at the beautiful Tan-Tar-A Resort at Osage Beach, October 28-29. In the words of Jane Stewart who recently spent a week-end there with her husband, "It is simply spectacular—can't be described adequately—must be seen. If the women could only see it once, we'd be swamped with reservations!"

We had a deadline, August 31, in which to get in our guaranteed reservations, but if you haven't made yours yet and wish to go—and I hope you do—please write Mrs. Henry Durst, No. 1 Ivy Lane, Fulton, Mo. It may not be too late yet. Don't delay!

Our program promises to be most educational and informative and the dinner and luncheon delicious. Johnson County has charge of the entertainment after the dinner and I am sure it will be fun. Our own Betty Sutter who, we proudly say, is our new National President-elect, will be there to give us much pertinent information. The Fifth and Sixth District members, under the able direction of Betty Durst, Fern Ritterbusch, Audrey Boger, and Jane Stewart, are working hard to make this an outstanding event for you. Please come!

The Point System sheets will be distributed at this meeting also, so that you may have a guide for your year's work.

The officers and county presidents are asked to have their reports ready, and, if they cannot be present, to file them with the Recording Secretary, Mrs. Stuart Exon.

I hope you have read your fine new *National Bulletin* and that you will emphasize the theme which your National President, Mrs. William H. Evans, is stressing—"Better Health—Better World." It is a wonderful theme to which I am sure we would all say, "Amen."

If you have not already sent me your yearbooks or lists of officers for the coming year, please do so.

As I write this, I have two more rehearsals before directing our Community Chorus concert, "An Evening with Cole Porter," so I'll just say in closing—"let's get this show on the road"—for a fine year in Auxiliary, that is!

Volume 61, Number 10—October, 1964

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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HENRY M. PARRISH, M.D., D.P.H., *Columbia*

Characteristics of Snakebites in Missouri

Missouri has the highest annual incidence of poisonous snakebites in the North West Central region of the nation.

A résumé of poisonous snakebites and treatment are discussed.

Dr. Parrish is from the Department of Community Health and Medical Practice School of Medicine, University of Missouri, Columbia.

This investigation was supported in part by Public Health Service Research Grant GM 11268-02 from the Division of General Medical Sciences, Public Health Service.

Missouri has the highest annual incidence of poisonous snakebites of the states in the West North Central Region of the United States. The annual snakebites rates per 100,000 population for states in this region were: Missouri, 5.42; Kansas, 5.28; South Dakota, 4.56; Nebraska, 3.26; North Dakota, 0.79; Iowa 0.33, and Minnesota, 0.09. Little has been published about the snakebite problem in Missouri. It is rather remarkable that only two people died from poisonous snakebites in Missouri during the 10 year period, 1950 to 1959.[1] The purposes of this study were: (1) to describe the epidemiological characteristics of poisonous snakebites in Missouri; (2) to relate some medical findings associated with these bites, and (3) to review briefly current concepts of snakebite treatment.

Poisonous Snakes

According to Conant,[2] the following species and sub-species of poisonous snakes are indigenous to Missouri: the northern copperhead *(Agkistrodon contortrix mokeson)*, the southern copperhead *(Agkistrodon contortrix contortrix)*, the western cottonmouth moccasin *(Agkistrodon piscivorus leucostoma)*, the western pigmy rattlesnake *(Sistrurus miliarius streckeri)*, the eastern massasauga *(Sistrurus catenatus catenatus)*, the western massasauga *(Sistrurus catenatus tergeminus)*, the timber rattlesnake *(Crotalus horridus horridus)*, and the canebrake rattlesnake *(Crotalus horridus atricaudatus)*. Coral snakes are not native to Missouri. Thus, there are eight species or subspecies of poisonous snakes in Missouri. See figure 1 for photographs of poisonous snakes of Missouri.

All of Missouri's poisonous snakes are pit vipers. They are so named because of a characteristic pit which is located between the eye

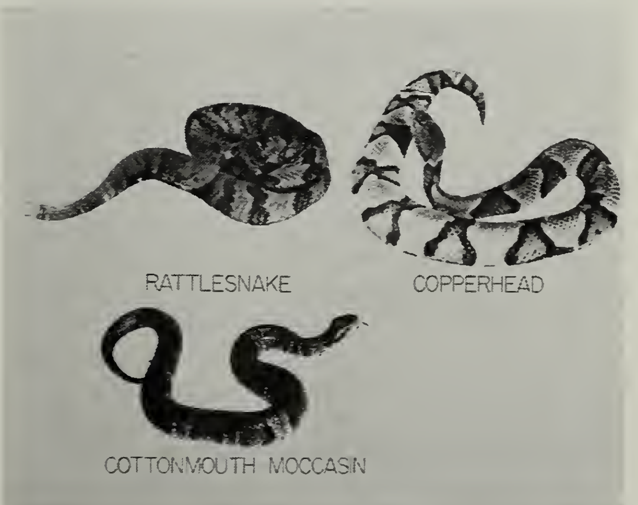

Fig. 1. Poisonous snakes indigenous to Missouri.

and nostril on each side of the body. Pit vipers also are identified by elliptical pupils and by two well-developed fangs which protrude from the maxillae when the snake's mouth is opened. Rattlesnakes have rattles which are attached to their tails. Harmless snakes do not have facial pits, they have round rather than elliptical pupils, and while they have teeth, they lack fangs.

Oftentimes people will chop off the head of a snake which has bitten someone and bring the snake's body in for identification. Pit vipers can be identified by turning the snake's belly upwards and noting a single row of subcaudal plates just below the anal plate. Harmless snakes have a double row of subcaudal plates. Figure 2 depicts the characteristic features of pit vipers and harmless snakes.

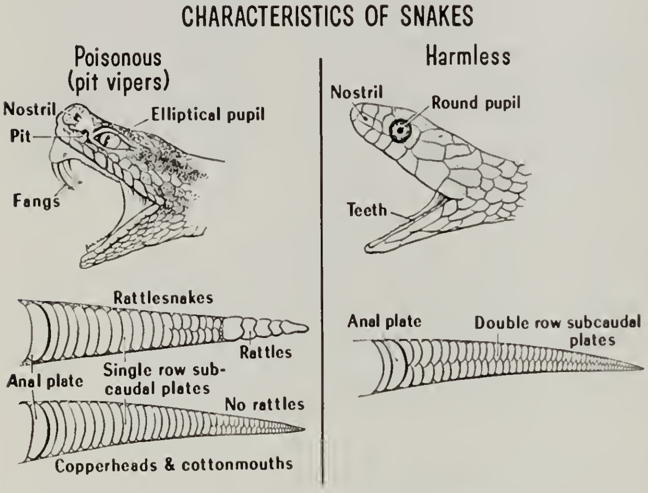

Fig. 2. Characteristic features of poisonous (pit vipers) and harmless snakes.

Methods of Study

A questionnaire and letter explaining the purpose of this study were mailed to a "selected" group of Missouri hospitals listed in *Hospitals.* The hospitals selected for this study were general hospitals, children's hospitals and college infirmaries. Army, Navy, Coast Guard, Public Health Service, Air Force and Veterans Administration hospitals also were sent questionnaires. Maternity, tuberculosis and mental hospitals were omitted as they would not be expected to treat snakebite victims. A total of 114 Missouri hospitals comprise the study group. Each hospital was requested to report all in-patients admitted to the hospital for snakebite treatment during 1958 and 1959.

Most hospitals do not code and tabulate the diagnoses of emergency room and out-patient clinic visits. Since some snakebite victims are not admitted to the hospital as in-patients, it seemed essential to ask a sample of practicing physicians how many snakebite victims they treated on both an out-patient (office, home, emergency room) and on an in-patient basis. Previous surveys,[3, 4] have shown that most people with venomous snakebites are treated by general practitioners, surgeons, internists, pediatricians and orthopedic surgeons. Therefore, a random sample of one-third of all the Missouri physicians in these categories of practice who were listed in the American Medical Directory were sent questionnaires.

Death certificates for fatal snakebite cases were requested from the Division of Health of Missouri.

Results

This report is based on questionnaires returned by 114 (100 per cent) of 114 Missouri hospitals. It is supplemented by questionnaires returned by 606 (78 per cent) of 780 practicing physicians in the state). The Division of Health of Missouri indicated that there was one snakebite death in 1959 and none in 1958.

Incidence.—Missouri hospitals reported a total of 68 in-patients treated for poisonous snakebites during 1958 and 1959. There were 32 cases in 1958 and 36 cases in 1959—an average of 34 cases per year. Of the 68 snakebites reported during 1958 and 1959, detailed case reports were received for 56 patients and only numbers of bites were reported for 12 cases. All of the analyses in this paper, excluding the estimate of incidence, were based on the 56 detailed case reports received from hospitals.

Physicians' reports, when adjusted to account for all Missouri physicians in the practice categories mentioned, indicated that approximately 111 in-patients and 123 out-patients were treated for snakebite accidents each year. The difference between the estimate of 111 in-patients treated by physicians and the average of 34 in-patients reported by hospitals can be explained, in part, by the following facts: (1) 16 counties from which physicians reported snakebites did not have hospitals listed in the *Hospitals Guide Issue;* (2) there was evidence of under reporting snakebite in-patients from 12 hospitals which participated in the study; and (3) physicians indicated that many in-patients were treated in small clinics and hospitals not listed in *Hospitals Guide Issue.* Taking all of these various reports into consideration, I estimate that approximately 234 (111 in-patients and 123 out-patients) are treated annually for poisonous snakebites in Missouri. This provides an incidence of 5.42 bites per 100,000 population per year.

Geopathology.—The geographical distribution of snakebites reported in Missouri during 1958 and 1959 may be seen in figure 3. The lightly shaded counties are those from which hospitals reported in-patients treated for snakebites. An appropriate symbol is used to mark each hospitalized patient who was bitten by a specific kind of snake. The darker shaded counties are those counties from which physicians reported snakebite cases, but from which no cases were reported by hospitals.

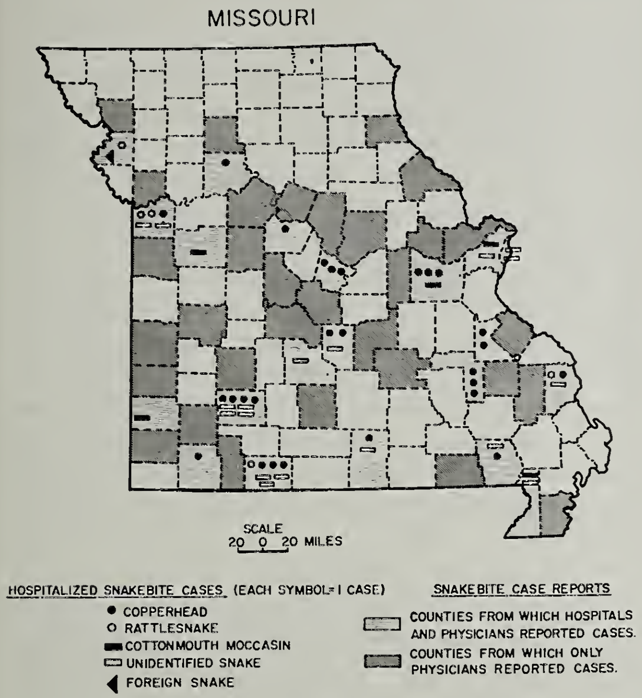
MISSOURI
SCALE
20 0 20 MILES
HOSPITALIZED SNAKEBITE CASES (EACH SYMBOL=1 CASE)
● COPPERHEAD
○ RATTLESNAKE
▬ COTTONMOUTH MOCCASIN
▭ UNIDENTIFIED SNAKE
◀ FOREIGN SNAKE
SNAKEBITE CASE REPORTS
▭ COUNTIES FROM WHICH HOSPITALS AND PHYSICIANS REPORTED CASES.
▨ COUNTIES FROM WHICH ONLY PHYSICIANS REPORTED CASES.

Fig. 3. Geographical distribution of poisonous snakebites in Missouri, 1958 and 1959.

Of 56 people hospitalized for snakebite treatment for whom detailed records were available, 27 (48 per cent) were bitten by copperheads, five (9 per cent) by rattlesnakes, five (9 per cent) by cottonmouth moccasins, one (2 per cent) by a foreign snake, and 18 (32 per cent) by unidentified poisonous snakes. The bite by a foreign snake was inflicted by a cobra *(Naja sp.)* when the owner was cleaning the snake's cage.

Figure 3 shows that most snakebites occurred south of the Missouri River. With one exception, all of the counties north of the Missouri River reporting snakebites bordered either the Missouri River or the Mississippi River. Poisonous snakebites were rarely reported from the northern one third of the state. Judging from the geographical distribution of bites it seems likely that a high percentage of bites by unidentified poisonous snakes actually were inflicted by copperheads. The geographical patterns of bites by various kinds of poisonous snakes in figure 3 are consistent with the ecological ranges of poisonous snakes in Missouri described by Conant.[2]

Temporal Relationships.—The monthly distribution of snakebite accidents is shown in table 1. Snakebites were infrequent during the colder months of the year—November, December, January, February, and March. In general, snakes are usually inactive and/or hibernating during the colder months. Most snakebites in Missouri occurred from April through October when 55 (98 per cent) of the 56 bites were inflicted. This striking seasonal distribution of bites coincides with the time that snakes are most abundant and active and with the time that people have greater exposure due to out-of-doors occupations and recreation. Similar "seasonal epidemics" of venomous snakebites have been observed in New England and North Carolina.[3, 4]

TABLE 1

SEASONAL DISTRIBUTION OF POISONOUS SNAKEBITES IN MISSOURI, 1958 AND 1959

Month	*No. Bites*	*Month*	*No. Bites*
January	0	July	14
February	0	August	9
March	0	September	5
April	1	October	2
May	12	November	1
June	12	December	0

The time of day when most snakebite accidents happened was the six hour period from 3:00 to 8:59 p.m. when 25 (45 per cent) people were bitten. The number of bites by three hour periods of time were: 6:00 to 8:59 a.m., five bites; 9:00 to 11:59 a.m., 14 bites; 12:00 noon to 2:59 p.m., six bites; 3:00 to 5:59 p.m., 12 bites; 6:00 to 8:59 p.m., 13 bites; 9:00 to 11:59 p.m., four bites; and 12:00 midnight to 2:59 a.m., one bite. There were no bites from 3:00 to 5:59 a.m. The time the bite accident happened was not stated for one case.

Bite Victims.—There were 33 white males, 23 white females, no non-white males and no non-white females admitted to Missouri hospitals for snakebite treatment during 1958 and 1959.

Using the 1960 census for the population of

Missouri the bite rates per 100,000 population were: 1.72 for white males, 0.0 for non-white males, 1.15 for white females and 0.0 for non-white females. Thus, males had higher snakebite rates than females.

The age distribution of Missouri bite victims is shown in table 2. The largest number of bites happened to children and youths 10 to 19 years of age (17 bites). Forty-three per cent of all snakebites were inflicted on children and young adults less than 20 years of age. Age-specific bite rates are much more meaningful since they take into account the population at risk in a particular age group. The highest biannual bite rates per 100,000 population were: 10 to 19 years of age (2.48), and 20 to 29 years of age (2.20). The lowest bite rate was found among people 60 to 69 years of age.

TABLE 2

AGE DISTRIBUTION OF HOSPITALIZED SNAKEBITE VICTIMS IN MISSOURI, 1958 AND 1959

Age Group (years)	*Population at Risk**	*No. Bites*	*Rate per 100,000***
0-9	887,766	7	0.79
10-19	685,524	17	2.48
20-29	500,652	11	2.20
30-39	543,885	5	0.92
40-49	524,896	7	1.33
50-59	477,309	5	1.05
60-69	374,593	2	0.53
70 or more	325,188	2	0.62

* Based on the 1960 Census of the Population of Missouri.
** These rates are only on hospitalized patients for whom information was available.

An analysis of the occupations of the patients showed that 21 were children, 15 were housewives, six were farmers or farm laborers, five were laborers other than farm laborers, three were members of the Armed Forces, two were managers, two were professional snake handlers, one was a craftsman and one was a professional (school teacher).

Activity and Place.—Ten bites occurred while people were working or walking in their yards. An additional seven children were bitten while playing in their own yards. Six people were bitten while handling a poisonous snake, four while fishing, three while working on a farm not near the house, three while working around a hen house or barn, two while walking near a highway, two while picking up lumber or wood, one while picking berries, one while on a camping trip and one while on Army field exercises. The activity was not stated for the remaining patients.

The place where the bite accident happened is closely related to the activity when bitten. The largest number of snakebites, 17, happened right in patients' own yards. Five people were bitten in a field adjacent to the house, four near a river or lake or other body of water, four on a farm not near the house, three in a barn or hen house, three in the woods, two in a building, two on or near a highway, and one in a field away from the house. The place where the bite took place was not coded for the remaining patients.

Site and Severity.—The anatomic sites on human beings where venomous snakes inflicted their bites are shown in table 3. Ninety-eight per cent of the bites were inflicted on the extremities —30 per cent on the upper extremities and 68 per cent on the lower extremities. The fingers and hands were the parts most often bitten on the upper extremities. The feet and lower legs, including the ankles, were the parts most frequently bitten on the lower extremities.

TABLE 3

ANATOMICAL SITES OF BITES INFLICTED BY POISONOUS SNAKES IN MISSOURI, 1958 AND 1959

Anatomical Site of Bite	*Side of Body Right*	*Left*	*Total No. of Bites*
Head, face & neck	0	0	0
Trunk, front	0	0	0
Trunk, back	0	0	0
Upper arm	0	0	0
Forearm	1	2	3
Hand	2	4	6
Fingers	4	4	8
Upper leg	1	1	2
Lower leg & ankle	10	11	21
Foot	4	6	10
Toes	2	3	5
Not stated			1

A modification of the clinical classification of pit viper venenation by Wood, Hoback and Green[5] was used to determine the severity of bites. Bites were classified as follows:

Grade 0.—No venenation. Fang or tooth marks, minimal pain, less than 1 inch of surrounding edema and erythema. No systemic involvement.

Grade I.—Minimal venenation. Fang or tooth marks, severe pain, 1 to 5 inches of surrounding edema and erythema in first 12 hours after bite. No systemic involvement usually present.

Grade II.—Moderate venenation. Fang or tooth marks, severe pain, 6 to 12 inches of surrounding edema and erythema in first 12 hours after bite, systemic involvement may be present—nausea, vomiting, giddiness, shock or neurotoxic symptoms.

Grade III.—Severe venenation. Fang or tooth marks, severe pain, more than 12 inches of surrounding edema and erythema in first 12 hours after bite, systemic involvement usually present as in Grade II.

The severity of venenation (venom poisoning) was classified as follows for 55 hospitalized cases: 14 (25.4 per cent) were Grade 0; 14 (25.4 per cent) were Grade I; 22 (40 per cent) were Grade II; and five (9 per cent) were Grade III. The severity of venenation was not stated for one case. There was one fatality among the 56 hospitalized cases in this series, providing a case-fatality rate of 1.8 per cent. However, when one realizes that about 53 per cent of all poisonous snakebites in Missouri are treated on an out-patient basis, the true case-fatality rate probably is less than one half of one per cent. This is confirmed by the fact that there were only two snakebite deaths in Missouri from 1950 through 1959.[1] A 74 year old farmer was bitten in 1951 by a large rattlesnake while picking berries. He died that same day. The other fatality involved a 50 year old man who was bitten in 1959 by a cottonmouth moccasin while fishing. He died 10 hours later. Contrary to popular belief, few patients die within the first few hours following a poisonous snakebite. About 70 per cent of them die from six to 48 hours after venenation takes place.[6]

The fact that Missouri has a relatively high incidence of poisonous snakebites with a low case-fatality rate can be explained: (1) by the high percentage of copperhead bites and the low percentage of rattlesnake bites; (2) by the prompt availability of medical care; and (3) by the effectiveness of snakebite trèatment. Large rattlesnakes *(Crotalus sp.)* cause more deaths than any other poisonous snakes in the United States.[6] Copperhead bites produce few fatalities.

TREATMENT

The current treatment of North American pit viper (rattlesnake, cottonmouth moccasin and copperhead) bites includes both minor surgery and medical forms of treatment. A constricting band (tourniquet) should be applied lightly to the involved extremity several inches proximal to the bite. The constricting band should be applied only tight enough to occlude the superficial venous and lymphatic flow. It should not occlude the arterial circulation and it should be released every 10 to 15 minutes for a minute or two. As edema resulting from venom poisoning spreads, the constricting band should be advanced to keep just ahead of the swelling. The purpose of the constricting band is to impede the spread of venom until incision and suction can be used to remove the venom mechanically and/or until antivenin can be administered to neutralize the venom.

Incision and suction (I.S.) is effective in removing venom from experimental animals up to about 120 minutes after the venom is injected. The sooner it is used, the larger the amount of venom that can be removed. Suction should be used for about one hour. We have found the suction cups supplied in the Cutter and the Becton-Dickinson snakebite first-aid kits effective for removing pit viper venom. Incisions, one quarter inch long and one eighth to one quarter inch deep, are made into the subcutaneous tissues over the fang puncture. A few (three to five) additional incisions may be made in the surrounding edematous tissues. A large number of incisions is not needed. Immobilization aids in limiting the spread of venom. However, if one must decide between immobilization or seeking prompt medical treatment, the later should be sought.

The "3 A's" (antivenin, antibiotics and tetanus antitoxin and/or toxoid) are recommended, in addition to I.S., in treating all serious pit viper bites. Antivenin Crotalidae Polyvalent (Wyeth) is effective in neutralizing the venoms of all North American pit vipers. It is not protective against coral snake venom. Since antivenin is manufactured from horse serum, the patient should receive a skin test before antivenin is given. For Grade I venenations antivenin may be administered in the deltoid or gluteus muscles. In Grade II and Grade III venenations, antivenin diluted in 1,000 cc. of normal saline solution may be given intravenously.[7] Studies with radioisotopes have shown that antivenin accumulates at the site of the bite more rapidly after intravenous administration than after intramuscular administration.[8] Injection of antivenin into the local bite area is not a particularly effective way to administer antivenin. We have found the following amounts of antivenin useful in treating the various Grades of venenation: Grade 0 (no venenation) requires no antivenin; Grade I (minimal venenation) may require 10 cc. (one ampoule) of antivenin; Grade II (moderate venenation) requires 30 to 40 cc. of antivenin; and Grade III (severe venenation) requires 50 cc. or more of antivenin.

Since snakes' mouths and venoms may harbor pathogenic organisms, antibiotics and tetanus antitoxin and/or toxoid should be given prophylactically. Gram negative organisms predominate, hence a broad spectrum antibiotic is indicated. Penicillin used by itself is not adequate treatment.

Cortisone and ACTH do not affect the survival rate of animals poisoned with pit viper venom. They probably should not be used during the first few days after venenation, although they may be beneficial later in treating serum sickness resulting from antivenin therapy. Antihistamines are contraindicated as they shorten the survival time of animals poisoned with pit viper venoms. Shock resulting from venom poisoning should be treated with infusions of blood, plasma, saline solution and vasopressor drugs. Meperidine hydrochloride and other analgesics may be given to relieve pain. Recently there have been reports of excessive tissue necrosis and amputations associated with cold therapy such as packing an extremity in ice or using ethyl chloride.[8] In my opinion, cold therapy should not be used in treating pit viper bites.

SUMMARY

Missouri has the highest annual incidence of poisonous snakebites of the states in the West North Central Region of the United States. An estimated 234 (111 in-patients and 123 out-patients) were bitten by snakes annually—an incidence of 5.42 bites per 100,000 people. However, the estimated case-fatality rate was less than one half of one per cent.

Of 56 in-patients reported in detail by Missouri hospitals during 1958 and 1959, 27 (48 per cent) were bitten by copperheads, five (9 per cent) by rattlesnakes, five (9 per cent) by cottonmouth moccasins, one (2 per cent) by a foreign snake, and 18 (32 per cent) by unidentified poisonous snakes. "Seasonal epidemics" of snakebites occurred, with 98 per cent of the bites inflicted from April through October.

Males had higher bite rates than females and whites had higher rates than non-whites. Forty-three per cent of the cases were among children and young adults less than 20 years of age. Ninety-eight per cent of the bites were on the extremities—30 per cent on the upper extremities and 68 per cent on the lower extremities. Current snakebite treatment is discussed.

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DONALD A. B. LINDBERG, M.D.; GARST R. REESE
and CHARLES BUCK, *Columbia*

Computer Generated Hospital Diagnosis File

One is accustomed to hearing of the marvels and miracles which computers are expected to shower on the patient care profession. This paper will tell of a tiny but concrete and present contribution of an electronic digital computer system to a functioning medical center—a computer generated listing of patient diagnoses tabulated acccording to the Standard Nomenclature of Diseases and Operations (SNDO).

There are two aspects of this contribution which make it worthwhile to describe. Firstly, the system is not a pipe dream but rather a reality. Secondly, the little tabular listing described is an easily comprehensible contribution whose simple utility has so far been apparent to anyone familiar with hospital records. Even so, we stumbled upon this device in the course of using our computer system. We did not plan to produce the tabulation. Hence, we believe that the use of this mechanism in a hospital may be worth suggesting to others. It should be noted that one does not by any means need a computer within the hospital in order to utilize the tabulation.

The System

In figure 1 is presented a view of a page from the tabular listing of patient diagnoses. On the left side of the page are the diagnostic codes of the Standard Nomenclature, in increasing numerical order. This system allows separate characterization of anatomical site, etiology and a qualification of severity of each diagnosis. The column headings are labelled accordingly. The first citation "3673-13" is followed in the next column by the term "OP," meaning that the citation is a surgical operation. This is the SNDO code for excision of the lower lobe of the left lung. The columns to the right, "PATS/DX" (number of patients per diagnosis) and "OCCUR/DX" (occurrences per diagnosis), indicate that this specific operation was performed on only one patient. The patient's unit number, 035989, appears in the right hand section of the listing.

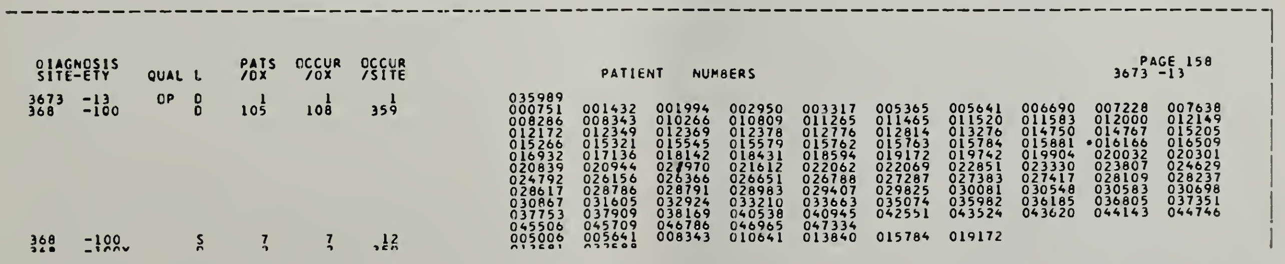
A portion of a computer oriented system which processes medical data at the Missouri Medical Center is described.

Dr. Lindberg is Assistant Professor of Pathology and Director of the Medical Center Computer Program; Mr. Reese is Research Assistant, and Mr. Buck is Systems Development Engineer.

This work was supported in part by USPHS grants T2-CA-5063 and 1SOL-Fr-05387.

The second citation shown in figure 1 is "368-100." "D" indicates that these data derive from the discharge diagnoses of the physicians. This is the SNDO code for interstitial pneumonia. The "PAT/DX" column contains a count of the total number of patients, 105, who had interstitial pneumonia. The next column "OCCUR/DX" indicates the diagnostic term interstitial pneumonia has been used 108 times. This is really an item count. The discrepancy stems from the fact that the patient whose unit number is asterisked must have received the same diagnosis during multiple readmissions.

The third citation in figure 1, "368-100" with



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 DIAGNOSIS              PATS  OCCUR  OCCUR                                                                                      PAGE 158
 SITE-ETY    QUAL L     /DX    /DX   /SITE                  PATIENT   NUMBERS                                                3673 -13

 3673  -13     OP  D       1      1      1       035989
 368   -100        D     105    108    359       000751  001432  001994  002950  003317  005365  005641  006690  007228  007638
                                                 008286  008343  010266  010809  011265  011465  011520  011583  012000  012149
                                                 012172  012349  012369  012378  012776  012814  013276  014750  014767  015205
                                                 015266  015321  015545  015579  015762  015763  015784  015881 *016166  016509
                                                 016932  017136  018142  018431  018594  019172  019742  019904  020032  020301
                                                 020839  020944  020970  021612  022062  022069  022851  023330  023807  024629
                                                 024792  026156  026366  026651  026788  027287  027383  027417  028109  028237
                                                 028617  028786  028791  028983  029407  029825  030081  030548  030583  030698
                                                 030867  031605  032924  033210  033663  035074  035982  036185  036805  037351
                                                 037753  037909  038169  040538  040945  042551  043524  043620  044143  044746
                                                 045506  045709  046786  046965  047334
 368   -100        S       7      7     12       005006  005641  008343  010641  013840  015784  019172
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Fig. 1. Close-up view of listing of patient discharge, surgical, and histopathologic diagnoses. The coding is Standard Nomenclature of Diseases and Operations.

an "S" represents those patients who had a biopsy or lung resection and in whom the interpretation of the histopathological specimen revealed interstitial pneumonia.

The column labelled "OCCUR/SITE" gives a count of all diagnoses made on the specific site indicated by the first three or four characters in the "SITE" column. Thus 359 discharge diagnoses involved "site 368," the interstitium of the lung. If one were curious what were those other abnormal conditions of the lung interstitium, he would have two possible approaches. Firstly, he could request those diagnoses via a computer program. Secondly, and more realistically, he could think about the pathology of the lung and then refer to the tabular listings for cases of interstitial emphysema, anthrosilicosis, pulmonary fibrosis, tuberculosis and such.

Thus the one listing combines discharge diagnoses, operations, and histopathological diagnoses. All three had been coded in the SNDO, so it seemed logical to merge the three data files for the purpose of a tabular listing and also for the purpose of the programmed computer inquiries.

The section on the right side of the listing contains the unit numbers of the patients who have the diagnosis or operation cited. Naturally each patient is identified by a unique hospital number. At present this is a six place decimal number. By July, 1964 we will have added a seventh digit which will be a calculated "check" digit. These are not shown in figure 1.

Usage of the Listing

It will be apparent that the presence of this listing answers one category of inquiries: that is, the requests of the professional staff and medical students for chart numbers of patients with a particular diagnosis. This is the "case retrieval" phenomenon. All the data on this file are now recorded on magnetic computer tapes. A variety of general computer inquiry programs have been written to handle more complex questions. The computer inquiry programs will be described elsewhere. They all require an in-hospital computer system. The little tabular listing does not; it could have been produced by any computer, even a hired service bureau machine, and need only be brought up to date periodically.

We have mentioned the "case retrieval" type of usage, and this has been the major application thus far. Another type of usage is known as "information retrieval." An example is the question, "how many patients in the experience of Hospital X have been seen for interstitial pneumonia?" The answer to such a question is given in the column of the listing labelled "PATS/DX" and is 105 patients. Obviously this is a primitive sort of information retrieval. Nonetheless, the information contained in this simple listing was not available before creation by the computer system of the tabular listing.

Limitations of This Listing

A bound tabular listing of all hospital diagnoses and patient numbers, even excluding the histopathologic and operative codings, will probably not be ideally suited for the large medical institution. This hospital has a bed capacity of 441 and has so far seen 60,000 patients. The tabular listing described required 394 pages of 132 character standard computer printed paper. This makes one handy volume. A larger institution might find the same system had necessitated two or three volumes. This might represent a limitation of sorts but would still be handier than an index card system and far superior to no case or information retrieval system at all. Based on our experience to date we estimate that the present system, even if limited to a single volume, could include from 250 to 300 per cent more patient listings and still fall short of 500 pages.

Creation of a Tabular Listing

The first step is to agree on a numerical classification scheme. Any scheme will be usable. For the past eight years our institution has accepted the SNDO. Next, it is necessary that a diagnosis be recorded by the physician on discharge of each patient. This is common good practice. We have arranged that a clerk in the medical record room then codes the diagnosis. In some situations it is conceivable that the physician may wish to look up the code, but this seems the less desirable arrangement. The next step is to transform these coded diagnoses, along with the patient unit number and any additional data desired, into a machinable document of some sort. We use key punches and punch cards. These are then read

(Continued on page 858)

Fig. 2. View of bound tabular listing of patient diagnoses at the University of Missouri Medical Center.

ROBERT L. GLASS, M.D., *Sedalia, and*
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Hemobilia: An Unusual Complication of Chronic Pancreatitis

A case of pseudocyst of the head of the pancreas is presented which completely obstructed the distal common bile duct and caused massive bleeding into the biliary tree. The surgical management is described with a satisfactory one year follow up.

Dr. Glass is in private practice in Sedalia and is an attending surgeon at the Ellis Fischel State Cancer Hospital. He was formerly chief resident at St. Louis City Hospital and Ellis Fischel State Cancer Hospital. Dr. Newstedt is an instructor in surgery at the University of Cincinnati School of Medicine and attending surgeon at Christ Hospital.

CHRONIC pancreatitis usually presents as recurrent episodes of epigastric pain, radiating to the back and accompanied by nausea and vomiting. The attacks are often triggered by the ingestion of rich food or alcohol. When calcification and pseudocyst formation occur, additional complications often intervene. A palpable abdominal mass occurs in 90 per cent, from 10 to 20 per cent of the patients will be jaundiced, and a similar number will have diabetes.[1] Massive gastrointestinal hemorrhage has been reported due to duodenal erosion by pancreatic calculi [2, 3] and Eichhorn and Butler[4] have reported massive hemobilia with acute pancreatitis several days after T-tube drainage.

Massive hemobilia is uncommon, most often seen after heptatic trauma[5] or with rupture of an intra heptatic aneurysm.[6] Other reported causes are choledocholithiasis,[7] iatrogenic biliary-arterial fistulae,[8] T-tube erosions of the common bile duct,[9] and hepatic abscesses.[10]

CASE REPORT

E.B., D-12,810, Christ Hospital, Cincinnati, Ohio. A 56 year old bartender was admitted on March 7, 1962 with a 48 hour history of severe epigastric pain radiating to the back with nausea and vomiting. This attack was brought on by eating highly seasoned chilli. The patient admitted to having had similar episodes during the previous 18 months. His alcoholic consumption averaged three to four bottles of beer a day.

Physical examination showed temperature of 98.6 F., pulse 100, respiration 22 and blood pressure 110/70.

The patient was a thin, chronically ill white man complaining of severe abdominal pain. His skin and sclera were slightly icteric. Ausculatation of the abdomen revealed absent bowel sounds; tenderness and guarding were noted in the right upper quadrant with the suggestion of an inflammatory mass. Roentgen examination of the abdomen revealed nodular calcification in the region of the head of the pancreas and adynamic ileus.

Laboratory data showed hemoglobin 15.8 per cent; white cell count 16,900 with 88 per cent segments, 1 per cent stabs and 11 per cent lymphocytes; FBS was 108; BUN 18. Bilirubin was direct 7.0 and total 8.0. SGPT was 110, CCF 0 and Alk Phos 25 King Armstrong units. Repeated amylases, calcium and phosphorous determinations were normal.

Hospital course. The patient was treated with naso-gastric suction, antibiotics, anticholinergics and intravenous fluids. After several days, his abdominal pain was much less and he was able to take oral fluids. Oral and intravenous cholecystograms failed to opacify any of the biliary tree. Upper gastrointestinal X-ray studies revealed narrowing and irregularity beyond the duodenal bulb, interpreted as "probable duodenal ulcer" (fig. 1). Ten days after

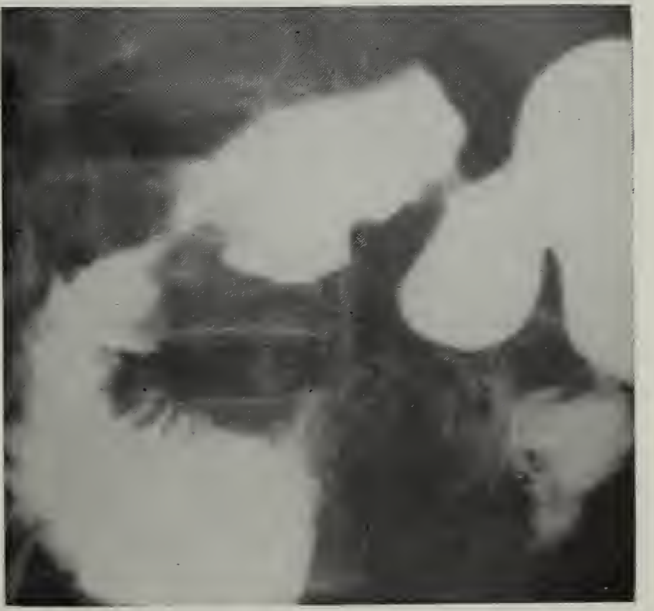

Fig. 1. X-ray of the upper gastrointestinal tract.

admission, there was an exacerbation of the abdominal pain; the patient passed several tarry stools, vomited blood streaked material, and had a drop in his hgb. to 6.4G per cent. Blood transfusions were given and the patient was operated on with the presumptive diagnosis of bleeding duodenal ulcer, chronic pancreatitis and acute cholecystitis, subsiding.

Surgery.—On April 18, 1962 exploration of the abdomen revealed a 15 to 20 cm. nodular mass replacing the head of the pancreas, a distended edematous gallbladder which contained stones, and a distended common bile duct. The small bowel distal to the ligament of Trietz was full of blood. The gallbladder was removed and the common duct opened. The common duct was distended with clots but when they were evacuated, no active bleeding was noted. A longitudinal duodenotomy was done over the first and second portion of the duodenum. The bowel was full of clotted blood distal to the ampulla of Vater and calcific nodules caused extrinsic pressure in the region of the ampulla but no site of recent or active bleeding could be seen. The common duct was drained and the abdomen closed.

Postoperative course.—Melena continued and the gastrostomy drainage was intermittently blood streaked. The transfusion of 2000 cc. of whole blood was necessary during the ensuing three weeks to maintain a hgb. level above 10.0G per cent. The daily biliary drainage was 500 to 1000 cc. but did not contain blood. Repeated T-tube cholangiograms showed complete obstruction of the distal common bile duct by calcific nodules in the head of the pancreas. Figure 2. Because of persistent bleeding and complete common duct obstruction, a pancreaticoduodenectomy was planned.

Surgery.—On May 8, 1962, resection of the head of the pancreas, duodenum and distal stomach was done (Whipple procedure) with reconstruction by end to end gastrojejunostomy, anastomosis of the tail of the pancreas end to side with the jejunum, and an end to side anastomosis of the common bile duct and jejunum beyond the pancreatic anastomosis.

Postoperative course.—The patient had an uncomplicated convalescence, being discharged on the ninth postoperative day. He was last seen nine months postoperatively, having gained 18 pounds and was asymptomatic.

Pathologic examination.—The head of the pancreas was replaced by a 15 cm. pseudocyst full of old blood. Multiple calculi were in and around the wall of the cyst. One of these was eroding the common bile duct 1 cm. above the ampulla, causing hemorrhagic necrosis of the overlying duct mucosa and complete obstruction of the duct.

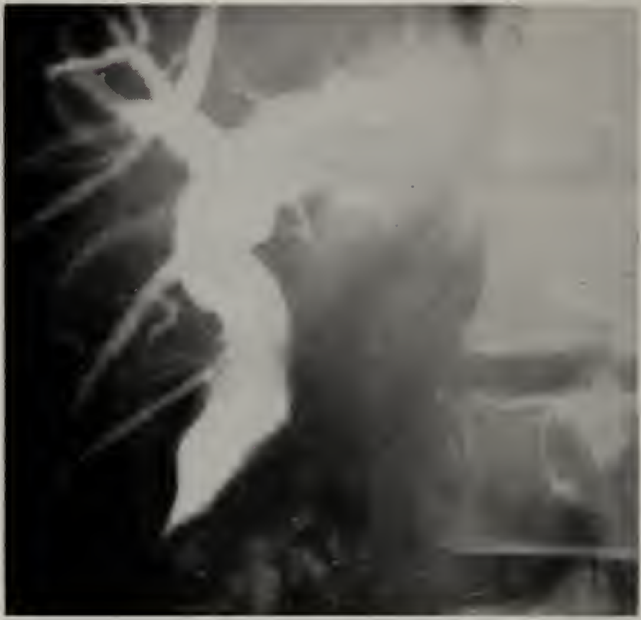

Fig. 2. Repeated cholangiograms showed complete obstruction of the distal common bile duct by calcific nodules in the head of the pancreas.

Summary

A case of massive hemobilia and complete biliary obstruction due to pancreatic calculi is presented along with the surgical treatment. This radical approach to selected benign lesions of the pancreas has been recommended by Cattell and Warren,[1] with a 7.7 per cent operative mortality.

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RICHARD T. O'KELL, M.D., ***Kansas City***

Adenoid Cystic Carcinoma of the Breast

Adenoid cystic carcinoma of the breast is a rare neoplasm which is histologically inseparable from the adenoid cystic carcinomas of salivary glands, or mucus secreting glands of the oral cavity, nasopharynx, pharynx, paranasal sinuses, trachea, bronchi, skin, lacrimal glands, cervix uteri[1] or Bartholin's glands.[2] The biologic behavior of adenoid cystic carcinoma of the breast is poorly understood. The diversity of available experience adds little to the meager knowledge of its clinical activity, but it seems that adenoid cystic carcinoma of the breast may metastasize widely and thus prove fatal. Geschickter[3] reported four cases briefly in his monograph on the breast. McLellan et al[4] and Nayer[5] have reported single cases, a grand total of six in the recent American literature. In passing, Foote and Stewart[6] have mentioned three cases and Ackerman[7] six. At St. Luke's Hospital there have recently been three patients with adenoid cystic carcinoma of the breast. Considering this an unusual experience, it seems worthwhile to report these cases and to mention briefly several other patients who have had small foci of adenoid cystic carcinoma in the midst of carcinoma arising from mammary duct epithelium.

Case Reports

Case 1. A 55 year old, gravida 1, para 1, married white woman was admitted to St. Luke's Hospital on August 8, 1962, eight days after she noticed a tender lump in her left breast. Her father had recently died of an unstated type of cancer at the age of 85. There was no other pertinent history. Examination of the breasts revealed a firm, tender, movable 1 by 1 cm. mass in the upper outer quadrant of the left breast. A left radical mastectomy was done on August 9, 1962. Grossly, the tumor was a firm, yellow white nodule which cut with a gritty sensation. On microscopic examination, a typical adenoid cystic carcinoma was seen (fig. 1). There was no involvement of the regional lymph nodes. She was discharged August 31, 1962, without complication and at the present time (January 1964) she has no evidence of residual or recurrent tumor.

Case 2. A 47 year old, married, Caucasian woman was admitted to St. Luke's Hospital on December 7, 1962, complaining of a lump in her right breast which had been present for approximately six months. Other than this, her history was not contributory. Physical examination revealed a small mass in the upper outer quadrant of the right breast. Excision of what the surgeon felt was a fibroadenoma was performed on December 8, 1962. The tumor was pinkish gray, firm and cellular. It measured 1.0 cm. in its greatest diameter. Microscopic examination revealed a typical adenoid cystic carinoma of the breast. A right radical mastectomy was done on December 11, 1962. The breast contained a small fragment of residual tumor and, although many lymph nodes were sampled, no evidence of metastasis was found. Her postoperative course was uneventful and she was discharged on December 20, 1962. At the present time (January 1964) she has no evidence of residual or recurrent tumor.

Case reports of three patients with adenoid carcinoma of the breast, one with autopsy, are presented with discussion.

Dr. O'Kell is with the Department of Pathology of St. Luke's Hospital, Kansas City.

Case 3. A 76 year old, widowed, postmenopausal white woman was admitted to St. Luke's Hospital on August 16, 1960, complaining of left hip and

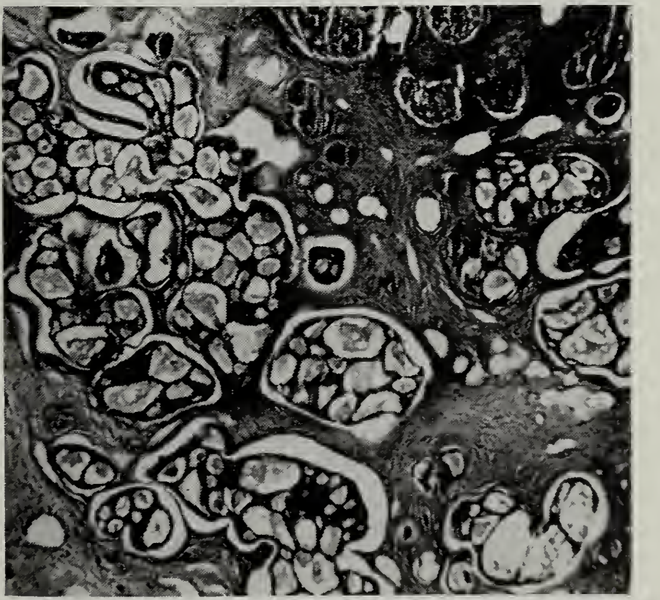

Fig. 1. Photomicrograph showing adenoid cystic carcinoma of the breast (Case 1) with broad bands of fibrous tissue between the islands of tumor cells. H&E, X32.

leg pain which had been present approximately one year and had become worse in the three months just before hospitalization. Approximately three years previously a left mastectomy had been done, presumably for carcinoma of the breast. The operation had been performed at another hospital and neither the operative summary nor the pathologist's report could be obtained. The mastectomy was assumed to have been radical because the left pectoral muscles were absent. Physical examination revealed a linear cicatrix of the left hemithorax with absence of the left breast and pectoral muscles. The left lower leg and foot were edematous; the left calf was 36 cm. in circumference while the right was 31 cm.

Roentgenographic examination failed to reveal any bony abnormality of the pelvis or legs. However, roentgenograms of the chest revealed several round areas of increased density in both the right and left lungs which were thought to be compatible with metastatic tumor. Other laboratory examinations were not remarkable. On August 24, 1960, the mastectomy scar was biopsied but only scar tissue was obtained. The scar was again biopsied on December 7, 1960, and this time adenoid cystic carcinoma was obtained (fig. 2). On the assumption that the pulmonary lesions were metastatic breast cancer, the patient was given 1 gm./kg. of thio-tepa during a five day period. She also received 100 mg. of testosterone every other day for a month, to a total of 1400 mg. Neither of these drugs appeared to alter her disease. Her hospital course was one of progressive deterioration with associated increasing pain and edema of the left leg, and she expired on March 3, 1961.

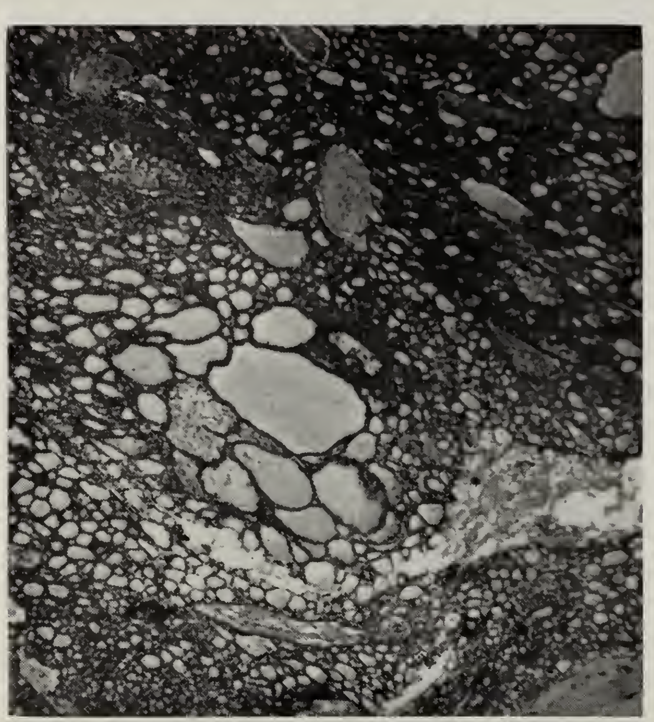

Fig. 2. Photomicrograph showing adenoid cystic carcinoma of the breast (Case 3). Compare this with figure 1, noting the paucity of fibrous tissue. H&E, X32.

At the time of postmortem examination, she was found to have adenoid cystic carcinoma, presumably arising in the left breast, which involved the left anterior thoracic wall, the lungs and completely occluded the inferior vena cava.

Discussion

Adenoid cystic carcinoma of the breast has been reported only in women. The incidence of this type of breast carcinoma is difficult to ascertain. Foote and Stewart[6] have called adenoid cystic carcinoma of the breast a "vanishingly rare" tumor, but is it? Albeit the tumor is rare, but it it does not appear to be vanishing. The four cases which Geschickter[3] reported were part of a series of 2,561 carcinomas of the female breast. At St. Luke's Hospital we yearly see somewhat more than 100 new cases of carcinoma of the female breast.

Symptoms began between 35 and 55 years of age in the patients where this information is recorded. The mean age was 41. These figures have no significance, however, because they were derived from only seven cases, including ours and those obtained from the literature. With the same reservation, the average patient was operated on at the age of 46. The long duration of symptoms seems to be an outstanding feature of adenoid cystic carcinoma of the major salivary glands.[8] However, it is dangerous to reach conclusions about a tumor arising from one organ because it is morphologically similar to a tumor of another organ.

The tumors reported here, as well as those reported by others, have been well delineated and at the time of operation no evidence of metastatic disease was found, although two patients have died with metastases. Both of these patients had involvement of the lungs and, in addition, adenoid cystic carcinoma was found in the chest wall and the inferior vena cava of the patient in case 3. It seems likely that the tumor of the chest wall was the result of seeding at the time of operation. Metastatic spread of mammary carcinoma to the lungs is extremely common and most often lymphangiitic, but the distinctly unusual complete occlusion of the inferior vena cava could have been either extension from perivascular lymphatics or direct vascular invasion. Presumably, the occlusion of the inferior vena cava was the cause of the pain and the edema which the patient in case 3 experienced.

Histologically, the tumor is composed of relatively uniform, polyhedral cells arranged in an-anastomosing cords and in sheets. The nuclei are basophilic, have a definite nuclear membrane, usually one and occasionally two nucleoli, contain scattered chromatin granules and fine chromatin strands. Mitotic figures are not common. The cytoplasm is eosinophilic and may contain vacuoles. These gland-like structures, which vary considerably in size, contain a substance which maybe either basophilic or eosinophilic, and stains with Mayer's mucicarmine. All of the sections of adenoid cystic carcinoma of the breast in our material produced mucin, although in varying amounts.

The histogenesis of adenoid cystic carcinoma of the breast is uncertain. Geschickter[3] chose to think of it as arising as a tumor of eccrine sweat glands. Although Lee et al[9] did not discuss adenoid cystic carcinoma of the breast, they differentiated what they considered to be mammary carcinomas of sweat gland origin from the breast carcinomas arising from duct epithelium, by a location near the skin which provided it with opportunity for early ulceration and pain. The epithelium was considered reminiscent of the epithelium of apocrine glands. Gates et al[10] in an excellent discussion of the tumors of sweat glands, argued strongly against adenoid cystic carcinoma of the breast being of sweat gland origin and stated that they considered it a tumor of mammary duct epithelium. The morphologic pattern was an integral part of the argument for adenoid cystic carcinoma arising from sweat glands. Gates et al[10] presented three points against sweat gland origin: First, if adenoid cystic carcinoma of the breast arose from sweat glands, sweat glands would have to exist below the corium, where they have not been observed. Second, cells which are morphologically similar to those of apocrine glands and adenoid cystic carcinoma of the breast, are also seen in other pathologic conditions of the breast such as chronic cystic mastitis. Third, all skin appendages, including the mammary gland, are derived independently from primitive surface epithelium and are no more intimately related to sweat glands than to other skin appendages. Nayer[5] postulated a histogenetic relationship between the myo-epithelial cells and adenoid cystic carcinoma of the breast. The myo-epithelial cell is a smooth muscle cell of epithelial origin[11] and is found in the breast, apocrine skin glands, glands of the eyelid and salivary glands. The normal cell is elongated with pale, distinct, eosinophilic cytoplasm which contains delicate fibrils and has an oval, spindle or rod shaped nucleus containing dense chromatin. On cross section, the myo-epithelial cell is triangular. In tumors, the cells usually maintain their general morphologic features[12] which in no way resemble the cells of adenoid cystic carcinoma of the breast. Foote and Stewart,[6] as well as Gates et al,[10] regard adenoid cystic carcinoma of the breast as a variant of carcinoma arising from the epithelium of the mammary ducts. Recently I have studied sections from the breasts of seven women with foci of adenoid cystic carcinoma in the midst of carcinoma arising from the epithelium of the mammary ducts (fig. 3). Morphologically, the cells are similar. It is my feeling that adenoid cystic carcinoma of the breast is a variant of duct carcinoma, but is nonetheless a definite entity as evidenced by the persistence of the adenoid cystic pattern in the metastases (fig. 4).

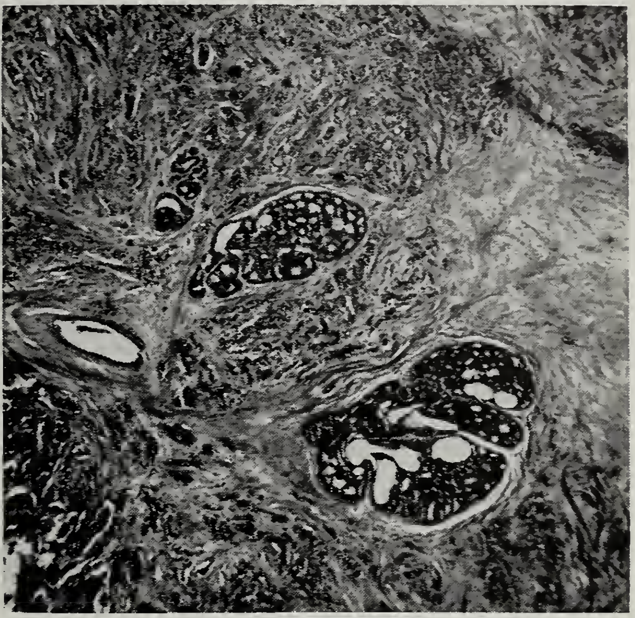

Fig. 3. Photomicrograph showing foci of adenoid cystic pattern in the midst of infiltrating duct carcinoma of the breast. H&E, X32.

In the light of present knowledge the treatment of adenoid cystic carcinoma should not differ

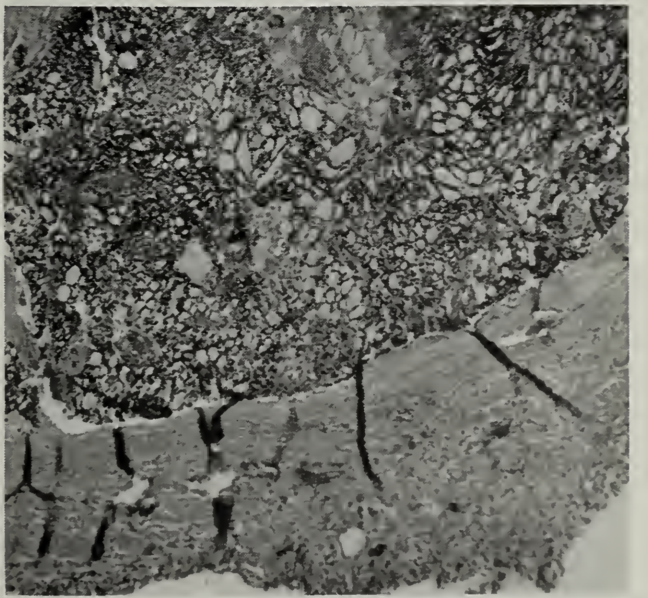

Fig. 4. Photomicrograph showing a portion of the wall of the inferior vena cava with metastatic adenoid cystic carcinoma completely occluding the lumen of the vessel (Case 3). H&E, X32.

from that of any other carcinoma arising from duct epithelium, namely, conventional radical mastectomy. However, as illustrated by the two fatal cases which have been reported, radical mastectomy is not always successful even in the absence of demonstrable metastases at the time of operation. Recurrence has been reported only twice, once by Nayer[5] and once in this report. Both times the recurrence was fatal, although the clinical course of Nayer's patient was quite long.

Summary

Three patients with adenoid cystic carcinoma of the breast have been presented, one of whom came to autopsy and I have not found a report of another such case in the literature. Mention has also been made of seven patients exhibiting discrete foci of an adenoid cystic pattern in the midst of infiltrating duct carcinoma, which is one reason for my feeling that adenoid cystic carcinoma is probably a distinct morphologic variant of carcinoma arising from the epithelium of the mammary ducts. The follow-up of available cases is poor, but appears that the biologic evolution is slow.

(I wish to thank Dr. John Griffith, Dr. E. O. Parsons, and Dr. William Slentz and Dr. Ed Slentz for their generosity in permitting me to report their cases.)

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HOSPITAL DIAGNOSIS FILE

(Continued from page 852)

into a computer system, written to magnetic tape, sorted and merged, and then printed to paper. The University of Missouri Medical Center has an IBM 1410 with five magnetic tape drives and 1301 Ramac. One could create the tabular listing with almost any computer system which had three tape drives.

After the data on punched cards have been read by the computer, about one hour of sorting and merging is required. Actual printing of the book of tabulated diagnoses requires about 50 minutes and is done onto five-part carboned paper stock. The cost of renting such a computer commercially would be about $100 per hour so that each time the listing is brought up to date, e.g. quarterly, one would be faced with about a $300 charge including cost of the paper. Five copies of the listing would be produced.

Availability of Computer Programs

The major problem in creating the system which has been described is the writing of computer programs. It should now be apparent that the actual computer time is a secondary consideration and that a hospital could easily bring such a repetitive job to a service bureau which would rent computer time. Programming can also be hired commercially. On the other hand, the beauty of computer programming is that it need only be done once. Should there be a hospital interested in trying this system, we would happily donate a copy of our computer programs. Modification can of course be made to existing programs much more easily, i.e. cheaply, than new ones can be written.

Summary

A portion of a computer oriented system is described which processes medical data at the University of Missouri Medical Center. This portion of our system stores in the form of Standard Nomenclature coding:

1) the clinical discharge diagnoses,
2) the diagnoses given histopathologic surgical specimens and biopsies,
3) the surgical operations performed.

The end result is a printed listing in one volume of all these data for every patient ever seen in the hospital, arranged according to the numerical SNDO diagnostic codes. The system would be usable by any hospital, even one without an in-hospital computer, and the offer is made to donate our computer programs to any hospital.

Addendum

Since submitting this manuscript, two additional types of coded data have been incorporated in the computer generated hospital diagnosis file. Now included in the system are the coded diagnoses of all cytological examinations and all autopsies which have been performed at this institution.

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Lomotil is an exempt narcotic; its abuse liability is low and comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

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SEARLE
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Leonard T. Furlow, M.D.

President's Message

On August 7, 1964, the Missouri State Medical Association suffered a grievous loss. The President of our Auxiliary, Mrs. Delevan ("Bitsy") Calkins, was killed in an automobile collision while returning from an Auxiliary meeting in Marshall. Her death was "in line of duty," those duties being attention to matters which are of vital concern to our Association, and to the medical profession as a whole.

I have suffered a personal loss, for I have known "Bitsy" since my earliest days at Barnes Hospital, and she was at the time of her death, as in those earlier days, busy doing things for others.

We may be, at times, inclined to take our Auxiliary for granted, so let us resolve that Bitsy's death will make us more cognizant of and grateful for their efforts.

I am certain that every member of the MSMA joins me in expressing to her family our deepest sympathy in this great loss which we have all sustained. They may be assured that we—like the Auxiliary—will miss her, and are deeply grateful for all that she has done.

Leonard T. Furlow

EDITORIAL

MORTALITY TRENDS FOR MAJOR TYPES OF HEART DISEASE

In the last decade, the mortality from arteriosclerotic heart disease, including coronary artery disease, has changed relatively little, while the death rates from a number of the less common types of heart disease have recorded a downward trend. This is evident from information of the Metropolitan Life Insurance Company which shows death rates by sex and age among white Metropolitan Industrial policyholders for the period 1960-63 and the relative change since 1950-53. In interpreting these data it should be borne in mind that, to some extent, they reflect changes in the terminology used by physicians in certifying cardiac deaths as well as some shifts in the statistical classification of such deaths.

The mortality from arteriosclerotic heart disease rose moderately among white male policyholders but among white females showed a slight tendency to decrease in the decade under review. The age-adjusted death rate from this cause increased 12 per cent among white males at ages 1-74 years—from 221.3 per 100,000 in 1950-53 to 248.1 in 1960-63. Moreover, the rise was concentrated at ages 35 and over, the trend being downward among young adult men. Furthermore, part of the increase may represent merely the more frequent certification of arteriosclerotic heart disease (including coronary artery disease) as the cause of death in cases which in earlier years would have been ascribed to hypertensive or other types of heart disease.

Among white females at ages 1-74, the age-adjusted death rate from arteriosclerotic heart disease decreased from 85.2 to 84.1 per 100,000 between 1950-53 and 1960-63. This reflected a reduction in mortality at ages 45-64 years, the other adult ages showing a contrary trend. In 1960-63, the disease was responsible for a little over 70 per cent of the total cardiac mortality among white females in the aggregate, compared with less than 60 per cent a decade earlier. Among white males, the corresponding proportion rose from about 70 per cent to more than 80 per cent.

In the decade under review, hypertensive heart disease recorded a marked reduction in mortality among policyholders in each sex. Among white men, the death rate from this cause decreased by at least one half at ages 35 and over, while among white women the rate fell even more rapidly. In some measure, this downward trend is attributable to improved methods of therapy, which may include the use of new anti-hypertensive drugs. In part, however, the reduction may reflect changes in certification, as already noted.

Appreciable progress continues to be made in controlling heart disease of infectious origin. Thus, the death rate from rheumatic heart disease fell 30 per cent between 1950-53 and 1960-63 among both males and females at ages 1-74. Reductions were recorded over the entire range of ages, the largest relative decreases occurring in adolescence and early adult life. These favorable trends reflect the decreased prevalence of acute rheumatic fever and the use of chemotherapy in the prevention and control of streptococcal infections responsible for rheumatic heart disease. Chemotherapy has also been a major factor in reducing the death rate from syphilitic heart disease.

While considerable advances have been made in the treatment of congenital heart disease, the death rate from this condition has shown an increase in the past decade. This rise in mortality among children and adolescents may result from the greater number of youngsters with such disorders who have been kept alive beyond infancy; another factor may be improved diagnosis and reporting of the condition on death certificates.

In general, the trend of mortality for the various types of heart disease among colored policyholders was similar to that for the white. One exception, however, should be noted; the age-adjusted death rate from arteriosclerotic heart disease among colored females at ages 1-74 increased 11 per cent—from 92.3 to 102.4 per 100,000 between 1950-53 and 1960-63, while among white females it decreased slightly.

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Ramblings of the Field Secretary

Four rural Missouri communities are in the process of completing the construction of two doctor office buildings under the guidance of the Sears-Roebuck Foundation in its Community Medical Assistance Plan. These towns are Bowling Green, Buckner, LaBelle and Monroe City.

The Sears-Roebuck Foundation along with the American Medical Association are engaged in a demonstration program to assist doctorless communities obtain medical care. The Foundation provides advice, guidance, and technical know-how only. There is no charge for their assistance to qualifying communities.

This is a demonstration program. They work with only around 20 communities a year. They work only with communities that have been surveyed economically and show sufficient potential to support a doctor at a level equal to or greater than the national average for general practitioners ($25,000 gross a year), and who also raise funds and construct a medical office building following the foundation plans and specifications.

There is considerable evidence to show that communities which provide modern medical facilities improve their competitive position in securing a physician.

These offices built under the program are usually rented to one or two young physicians at a reduced rental which is gradually increased to a normal figure over a period of time. The rent paid may be applied toward the purchase of the building.

John K. Day, M.D., a graduate of the University of Missouri Medical School in 1961, has recently located in Bowling Green and will rent the new community medical office building. Dr. Day interned at Kansas City General Hospital and completed, June 30, 1964, a two year general practice residency at Sacramento County Hospital in California.

Buckner, LaBelle and Monroe City in various stages of their office building construction are now actively seeking physicians for these respective locations.

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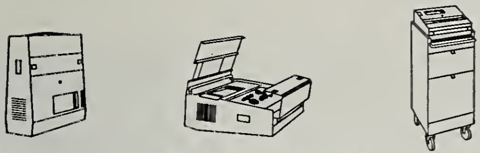

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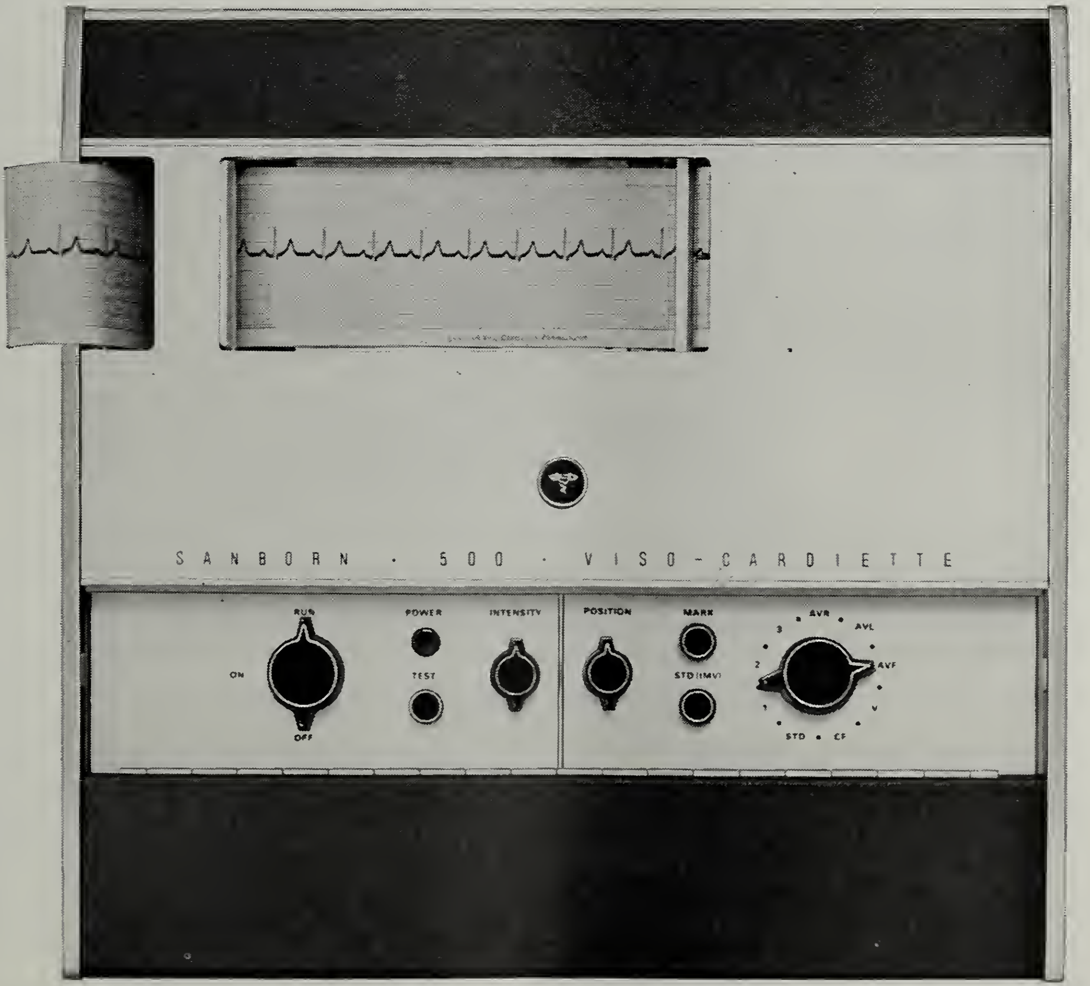

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News—Personal and Professional

The American College of Radiology recently appointed **Armand Brodeur**, M.D., St. Louis, to a committee working on radiology resident training programs.

A symposium on nutritional anemias, sponsored by the American Medical Association, will be held at Washington University School of Medicine on October 14. It is supported by the Missouri State Medical Association, the St. Louis Medical Society and the St. Louis County Medical Society as well as the AMA Council on Foods and Nutrition and Washington University.

The President's Council on Physical Fitness is sponsoring a regional fitness clinic for eight Midwestern states at Champaign-Urbana, Illinois, on October 16 and 17. Missouri will cooperate in the clinic.

The August 1964 issue of *ACOG Newsletter* listed 17 members who had attended all sessions of the American College of Obstetricians and Gynecologists. Among them were Drs. **Lawrence E. Mendonsa** and **Mary Elizabeth Morris** of St. Louis.

DePaul University recently honored **C. O. Vermillion**, M.D., for his achievements and services which reflected honor upon the university.

Recently elected president of the Lutheran Hospital medical staff is **Edward W. Czebrinski**, M.D., St. Louis.

The Central Surgical Association has elected **Carl E. Lischer**, M.D., St. Louis as president-elect.

The Bethesda Hospital medical staff recently elected **William H. Riley**, M.D., St. Louis, as president of the medical staff.

The official AMA representative to the 10th International Congress for Prophylactic Medicine and Social Hygiene meeting in Perugia, Italy, October 5 to 8 will be **George V. Feist**, M.D., Kansas City.

Recently appointed assistant dean of medicine at the University of Missouri Medical School is **William D. Mayer**, M.D., Columbia.

DEATHS

Webster, Joseph G., M.D., Kansas City, a graduate of Northwestern University, 1922; member of Jackson County Medical Society; aged 70; died July 25, 1964.

Gaebe, Harold C., M.D., Desloge, a graduate of Washington University, 1920; member of Mineral Area County Medical Society; aged 68; died August 6, 1964.

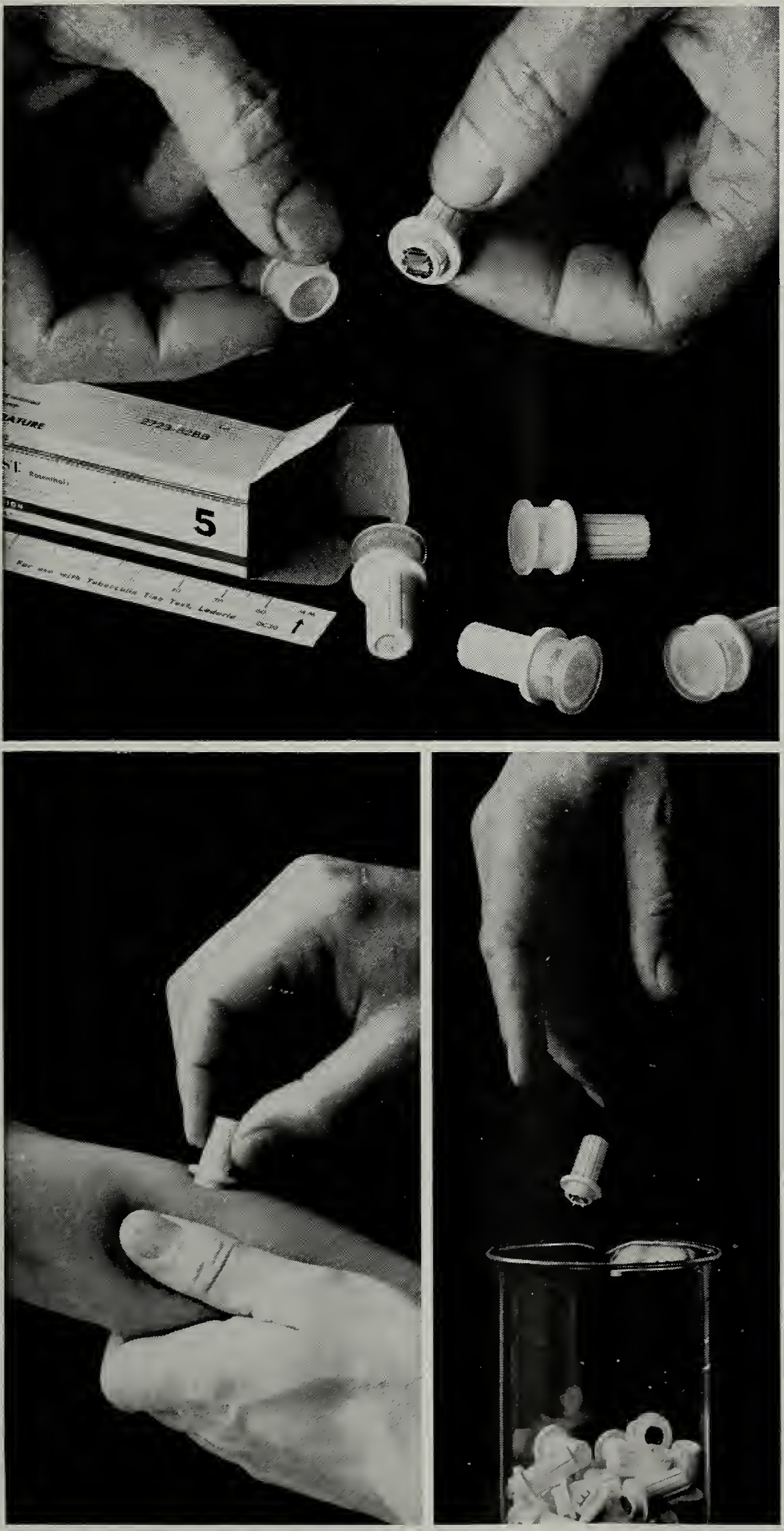
Brown, Eugene R., M.D., University City, a graduate of Chattanooga Medical College, 1901; member of St. Louis County Medical Society; aged 86; died August 10, 1964.

Hirsch, Albert, M.D., Vandalia, a graduate of Washington University, 1905; member of Montgomery County Medical Society; aged 84; died August 16, 1964.

BULLETIN ON MEDICARE!

"Medicare Appears Dead for This Year" was the headline in the St. Louis *Globe-Democrat* on September 16. Eight of 12 members of the Joint Senate-House Conference Committee are opposed to inclusion of Medicare in the Social Security Bill.

The conference committee is expected to meet in late September to work out a compromise which will boost cash benefits and taxes of the Social Security System, but without a Medicare provision. It was predicted by Congressional leaders that such a compromise will be adopted by the Senate and House, thus ending the Medicare threat for 1964.



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New Members

Ralph L. Biddy, M.D., 1221 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Biddy is a native of Detroit, Mich., received his preliminary education at the University of Detroit, and his M.D. degree at St. Louis University in 1958. He specializes in psychiatry.

Richard H. Butsch, M.D., 12025 Manchester Road, St. Louis, has become a member of St. Louis Medical Society. Dr. Butsch is a native of San Francisco, Calif., received his preliminary education at St. Martin's College, and his M.D. degree at St. Louis University in 1957. He specializes in internal medicine.

Robert S. Cohen, M.D., 630 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Cohen is a native of Nyack, N. Y., received his preliminary education at Union College, and his M.D. degree at State University of New York in 1962. He specializes in obstetrics and gynecology.

Mabelle A. Cremer, M.D., 4949 Rockhill Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Cremer is a native of New York City, received her preliminary education at Smith College, and her M.D. degree at New York Medical College in 1953. She specializes in obstetrics and gynecology.

Wilbur D. Dabbs, M.D., Sale Hospital, Neosho, has become a member of Ozarks Medical Society. Dr. Dabbs is a native of Granby, Mo., received his preliminary education at David Lipscomb College, and his M.D. degree at the University of Tennessee in 1962. He specializes in general practice.

H. Peter Ekern, M.D., 1415 S. Monroe St., Mexico, has become a member of Audrain County Medical Society. Dr. Ekern is a native of Mexico, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1959. He specializes in general practice.

Lloyd M. Harlow, M.D., 2462 Brooklyn Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Harlow is a native of Joplin, Mo., received his preliminary educa-

in the overweight stable adul

...fasting serum levels of insulin are usually normal, postprandial levels excessive[1-3]

...insulin acts in adipose tissue via hexose monophosphate shunt, principal path of glucose conversion to storage fat[1,4]

...excessive endogenous insulin acts to stimulate lipogenesis and weight gain[1,3,4]

tion at Howard University, and his M.D. degree at Howard University in 1958. He specializes in surgery.

K. Herbert Huber, M.D., Richmond, has become a member of Lafayette-Ray County Medical Society. Dr. Huber is a native of Moberly, Mo., received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1957. He specializes in surgery.

Marion E. Jones, M.D., 2462 Brooklyn Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Jones is a native of East St. Louis, Ill., received his preliminary education at Bradley University, and his M.D. degree at Howard University in 1959. He specializes in urology.

Forrest E. Kendall, M.D., 101 Memorial Drive, Kansas City, has become a member of Jackson County Medical Society. Dr. Kendall is a native of Topeka, Kans., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1963. He specializes in general practice.

Curtis W. Long, M.D., 105 Lee St., Butler, has become a member of West Central County Medical Society. Dr. Long is a native of Ironton, Mo., received his preliminary education at Missouri University, and his M.D. degree at Missouri University in 1963. He specializes in general practice.

Gerald D. Petersen, M.D., 7721 State Line, Kansas City, has become a member of Jackson County Medical Society. Dr. Petersen is a native of Gretna, Neb., received his preliminary education at the University of Kansas, and his M.D. degree at the University of Kansas in 1960. He specializes in internal medicine.

Martin E. Silverstein, M.D., 4949 Rockhill Road, Kansas City, has become a member of Jackson County Medical Society. Dr. Silverstein is a native of New York City, received his preliminary education at Columbia University, and his M.D. degree at New York Medical College in 1948. He specializes in surgery.

Elmer H. VanDyke, M.D., 415 S. Lamine St., Sedalia, has become a member of Pettis County Medical Society. Dr. VanDyke is a native of Sedalia, Mo., received his preliminary education at the University of Missouri, and his M.D.

(Continued on page 876)

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1. Gordon, E.S.: Metabolism 11:819, 1962. 2. Grodsky, G.M. et al.: Metabolism 12:278, 1963. 3. Weller, C. et al.: Scientific Exhibit, A.M.A., June 1962. 4. Sadow, H.S.: Metabolism 12:333, 1963. 5. Faludi, G.: J. Am. Med. Women's Assoc. 18:722, 1963. 6. Faludi, G.: Geriatrics 18:452, 1963. 7. Williams, R.H.: Textbook of Endocrinology, Ed. 3, Saunders, Phila., 1962, p. 610. 8. Weller, C. and Linder, M.: Am. Therap. Soc., June 1963. 9. Moss, J.M. et al.: Med. Times, July 1964.

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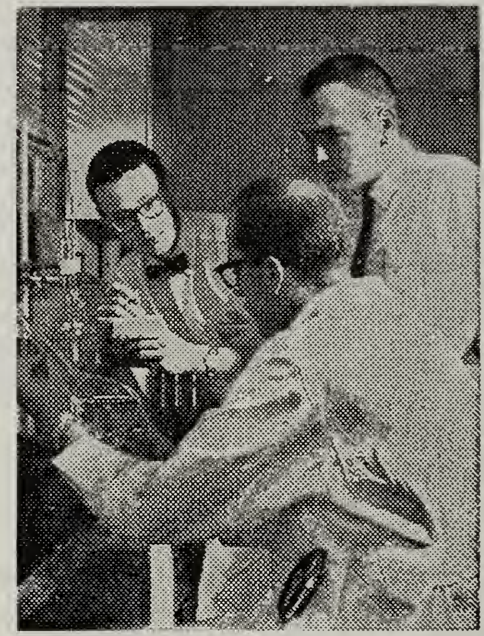

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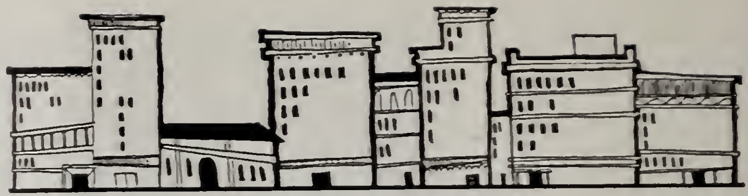

UNIVERSITY OF MISSOURI

Trips and Talks

J. M. Martt, M.D., associate professor of the Department of Medicine and head of the Medical Center Heart Station, presented a talk to the American College of Physicians in Los Angeles, Calif., October 8. The topic of the discussion was "The Effect of 20, 25 Diazacholestenol on Serum Cholesterol." An abstract of that talk follows: "Twenty, 25 diazacholestenol has been found to be a potent inhibitor of cholesterol biosynthesis. Its apparent site of action in the synthetic pathway of cholesterol is the inhibition of mevalonate formation. Forty-two subjects with hypercholesterolemia and coronary atherosclerosis were administered 25 mg. of this preparation daily for intervals up to 20 months. Serum cholesterol was determined every two to three weeks and serum lactescence, lipoproteins and phospholipids every six to nine weeks. Photographs of the arcus senilis in the cornea and of xanthelasma and xanthomata were made every three months. A fall in serum cholesterol was observed in 41 of the subjects with a mean reduction of 78 mg. per cent (30 per cent) from pre-treatment levels. A less predictable but favorable response was also seen in the beta/alpha lipoprotein ratio and in the serum phospholipids. Xanthelasma were observed to regress in several subjects however no change was observed in the arcus senilis. Desmosterol was identified by gas chromatography in the post-treatment sera of each of twenty subjects so tested suggesting that the site of inhibition of cholesterol synthesis occurs in part at a "later" phase in the cycle than the pre-mevalonate stage. Total serum sterol content was less in post-treatment sera despite the presence of desmosterol.

Dr. D. F. Durand, associate professor of the Department of Microbiology, attended the 6th International Congress of Biochemistry in New York on July 26 through August 1, 1964.

Dr. Frank B. Engley Jr., professor and chairman of the Department of Microbiology, as president of the Missouri Public Health Association, attended a Committee Meeting at the Missouri Hotel in Jefferson City on July 22.

Dr. R. M. Hyde, assistant professor of the Department of Microbiology, attended the 6th International Congress for Biochemistry with Dr. D. P. Durand.

Dr Robert L. Jackson, professor and Chairman; Dr. James M. Pickens, assistant professor; Dr. James N. Burkeholder, resident physician, and Mr. William Womack, all of the Department of Pediatrics, attended the 5th Congress of the International Diabetes Federation in Toronto, Canada.

Dr. Gwilym S. Lodwick, professor and Chairman of the Department of Radiology at the University of Missouri Medical Center, participated in a meeting at the International Business Machines Headquarters under the direction of Medical Information System of that company. The purpose of the meeting was to explore the application of image processing technology to radiology. The meeting was in New York City on July 15. Dr. Lodwick spent August 10 through 14 in Houston and Galveston, Tex. inspecting training programs in radiology for the Committee on Education for the AMA in cooperation with the American Board of Radiology. The inspection is part of a general program to improve training in radiology throughout the country. Dr. Lodwick edited "Radiology and the Skeletal System" for *Radiologic Clinics of North America,* published in August. In addition to editing the publication Dr. Lodwick wrote a paper for this edition entitled "Reactive Response to Local Injury in Bone."

Dr. Henry A. McQuade, associate professor of the Department of Radiology, went to Iowa State University to observe the electron microscope procedures. Dr. McQuade also attended an electron microscope school (theory and operation) in Camden, N. J. The school was sponsored by the Radio Corporation of America.

Dr. G. R. Ridings, M.D., Professor of Radiology, has had two papers published recently. The papers are entitled "Radiation Therapy for Carcinoma of the Cervix Uteri," which was published in the *Journal of the Oklahoma State Medical Association,* July, 1964, pages 347-353; and "Ewing's Tumor," published in the *Radiologic*

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*Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958.

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Abscess, pulmonary	17	16
Bronchiectasis	19	13
Bronchitis	286	267
Bronchopneumonia	192	179
Empyema	12	11
Pneumonia, lobar	150	146
Pneumonia, other febrile	160	150
Various infected pneumopathies	192	172
Totals	1,028	954 (92.8%)

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Clinics of North America, August, 1964, Vol. 2, No. 2.

Dr. M. S. DeWeese, M.D., professor and Chairman of the Department of Surgery, gave a formal talk reviewing results of research activities and clinical experience with a new surgical technic for control of pulmonary embolism in Traverse City, Mich. on July 30 and 31. Approximately 150 general practitioners and specialists and faculties of the University of Michigan and Wayne State Medical Schools attended the session which was sponsored by the Coller-Penberthy Medical Conference.

Dr. Hugh E. Stephenson Jr., professor of surgery at the University of Missouri Medical Center, was an alternate delegate at the meeting of the American Medical Association held in San Francisco, Calif. Dr. Stephenson also attended the meeting of the American College of Chest Physicians and Society for Vascular Surery in San Francisco and he was elected president of the Missouri Chapter of the American College of Chest Physicians

New Faculty Members

Arch W. Templeton, M.D., has been appointed Assistant Professor of Radiology. He came to the University from the Mallinckrodt Institute of Radiology in St. Louis.

Drs. Gertraud and Paul Wollschlaeger have been appointed assistant professors of radiology effective August 1, 1964. Prior to this date they were fellows in research in neuroradiology at Albert Einstein College of Medicine.

NEW MEMBERS

(Continued from page 871)

degree at the University of Missouri in 1958. He specializes in obstetrics and gynecology.

James P. Youngblood, M.D., 4620 Nichols Parkway, Kansas City, has become a member of Jackson County Medical Society. Dr. Youngblood is a native of Detroit, Mich., received his preliminary education at the University of Michigan, and his M.D. degree at the University of Michigan in 1957. He specializes in obstetrics and gynecology.

Ivan Zahony, M.D., 24th and Cherry Sts., Kansas City, has become a member of Jackson County Medical Society. Dr. Zahony is a native of Diosgyor, Hungary, received his preliminary education at Hungary Gymnasium, and his M.D. degree at Medical University of Budapest in 1953. He specializes in anesthesiology.

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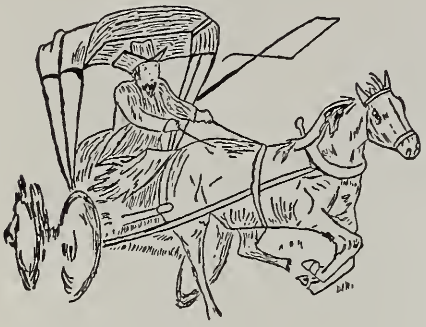
Missouri Medicine in Review



FORTY YEARS AGO

G. Wilse Robinson, M.D., Kansas City, advises: "We must bestir ourselves to a real, positive, aggressive interest in public affairs, to the end that the medical profession may demand and receive the proper recognition, that our advice may be listened to and accepted in all legislation which pertains to the health and physical welfare of the nation. We can only do this by organizing our forces and working together as a unit. We owe a duty to our country, to the public and to ourselves to abandon our policy of seclusiveness and become leaders in public affairs, especially in those matters pertaining to the health, sanitation, physical and mental welfare of the whole people."

Forty-five states now refuse to recognize the diplomas of the St. Louis College of Physicians and Surgeons, forty-six refuse to recognize the diplomas of the Kansas City College of Medicine and surgery, and 48 refuse to recognize the diplomas of the Kansas City University of Physicians and Surgeons. When Connecticut and Arkansas ban these three schools and other states continue keeping their doors locked against them it would seem that they must perforce go out of business.

Dr. Max Starkloff, health commissioner of St. Louis, and Dr. Joseph C. Willett, city bacteriologist, are considering the introduction of an ordinance in the Board of Aldermen providing for compulsory vaccination of all dogs against rabies.

Dr. John M. Frankenburger, of Kansas City, has been appointed superintendent of the Kansas City General Hospital to succeed Dr. W. L. Gist, who has resigned. Dr. Frankenburger graduated from the Kansas Medical College in 1893 and has been practicing in Kansas City since 1897. He was president of the Jackson County Medical Society in 1915.

Dr. G. W. Vinyard, Jackson, entered the fiftieth year of his practice recently and the occasion was made notable by the Southeast Missouri Medical Association electing him president for the second time at the recent meeting held at Charleston. This is an honor that has never been conferred on any other member of the Southeast Association. Dr. Vinyard has made for himself an enduring place in the hearts and affection of the people in Cape Girardeau and throughout the southeast section of the state.

TWENTY-FIVE YEARS AGO

Dr. Logan Clendening, Kansas City, delivered the Beaumont Lecture on the history of medicine at Yale University School of Medicine on April 21. His subject was "Medicine in Paris at the Time of Oliver Wendell Holmes' Visit."

Dr. Frank G. Nifong, Columbia, was honored on the occasion of his retirement after 50 years of practice by the Boone County Medical Society with a barbecue at the Pinnacles north of Columbia on June 8. Approximately 150 physicians and guests from all parts of the state attended. Dr. Nifong has practiced in Columbia since 1908.

Last year for the first time since 1933 cases of Rocky Mountain spotted fever were reported in the state. All cases last year were reported from counties that border the Mississippi River. Generally, when this virus makes its appearance it will reappear at the most unpredictable periods.

To the physician who would browse in the history of disease, inspect at first hand the remarkable originals upon which our science is founded and contemplate the mental stature of men whose only tools were the five senses and their own intuitive processes, the second edition of Dr. Ralph H. Major's "Classic Description of Disease" (Chas. C Thomas, Springfield, Illinois) will prove a veritable treat.

Whatever distinction it may be, St. Louis, in the person of Dr. Adam Hammer, contributed the first clinical description of coronary thrombosis. The clinical acumen of the gentleman who hoped to establish in St. Louis an American Heidelberg is best expressed in his own account of this extraordinary case which he saw in consultation.

In John R. Brinkley's recent libel and damage suit against Dr. Morris Fishbein as editor of *Hygeia,* in which a verdict was returned in favor of Dr. Fishbein, Federal Judge R. J. Mc-

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Millan emphasized the significance of medical ethics in his charge to the jury. The case involved the question of absolute privilege under the law of libel where the defense was truth and the protection of the public health.

TEN YEARS AGO

H. E. Petersen, M.D., St. Joseph, President-elect of the State Association, spoke at the Annual Session April 4, 1954: "The position of M.S.M.A., it seems to me, ought to be at once a patriotic and a realistic position. Certainly, no one of us would argue for a minute that our national government does not have the most binding and compelling obligation to care for those illnesses and injuries that fighting men have suffered as a result of their military duty. At the same time, however, when everyone, or nearly everyone, is to be a veteran, it becomes absurd to treat veterans as a class of citizens distinct from the rest of society. A man's military service to his country cannot relieve him of his civilian responsibility to care for himself and for his family. If it should, then, a society made up overwhelmingly of veterans would have to be a socialist society. Everybody would have the right to expect the state to care for him—and not only in the field of medical service but in all fields."

The 50th Anniversary of the Buchanan County Medical Society was climaxed by a banquet at the Moila Club, St. Joseph, on Wednesday night, June 2, 1954.

The Grand River Medical Society met June 10, at the Strand Hotel, Chillicothe. There were 26 members, 15 Auxiliary members and 16 pharmaceutical representatives present for dinner. The Annual Golf Tournament was held in the afternoon at the Chillicothe Country Club. Dr. Howard Carter won the beautiful trophy. Other winners were Dr. Watkins A. Broyles, Dr. H. S. Dowell, Louis Johnson, Dr. John S. Knight, Ray McIntyre and Dr. C. L. Clark. The scientific program was presented by Dr. John S. Knight, Kansas City, who presented an interesting paper.

MISSOURI ACADEMY OF GENERAL PRACTICE

(Continued from page 838)

Sunday, November 1 (Central Standard Time)

GENERAL SCIENTIFIC SESSION

9:00 a.m. **Organ and Tissue Homotransplantation,** Leslie E. Rudolf, M.D., Charlottesville, Va., Associate Professor of Surgery, University of Virginia School of Medicine, Charlottesville.

9:20 a.m. **Short Term Therapy in the Frigid Female,** William H. Masters, M.D., St. Louis, Associate Professor of Clinical Obstetrics and Gynecology, Washington University School of Medicine.

9:40 a.m. **Potassium Metabolism, Common Clinical Problems,** C. Thorpe Ray, M.D., Columbia, Professor and Chairman, Department of Medicine, University of Missouri Medical School.

10:00 a.m. **Resurgence of Venereal Disease,** Henry M. Parrish, M.D., Columbia, Associate Professor of Community Health, University of Missouri Medical School.

10:20 a.m. Intermission to View Exhibits.

11:00 a.m. **Operable Hypertension,** C. Rollins Hanlon, M.D., St. Louis, Professor of Surgery and Director, Department of Surgery, St. Louis University School of Medicine.

11:20 a.m. **Deep and Superficial Thrombophlebitis,** Leslie E. Rudolf, M.D., Charlottesville.

11:40 a.m. **Panel Discussion.**

12:15 p.m. Lunch and Exhibits.

SYMPOSIUM ON CURRENT CONCEPTS IN THE USE OF HORMONES

1:30 p.m. **The Use of Synthetic Progestogens in the Office Practice of Gynecology,** Robert W. Kistner, M.D., Brookline, Mass., Associate Professor of Obstetrics and Gynecology, Harvard Medical School.

1:50 p.m. **Hormones as Antitumor Agents,** Albert Segaloff, M.D., Associate Professor of Medicine, Tulane University Medical School and Director, Division of Endocrinology, Alton Ochsner Medical Foundation, New Orleans, Louisiana.

2:10 p.m. **The Use of Long Term Estrogens for Females,** Willard M. Allen, M.D., St. Louis, Professor and Head of the Department of Obstetrics and Gynecology, Washington University School of Medicine.

2:30 p.m. Intermission to View Exhibits.

3:00 p.m. **Induction of Ovulation with Clomid,** Robert W. Kistner, M.D., Brookline, Mass.

3:20 p.m. **The Use of Steroids in the Treatment of Arthritis,** Jack Zuckner, M.D., St. Louis, Director, Section on Arthritis, St. Louis University School of Medicine, St. Louis.

3:40 p.m. **Current Therapy of Thyroid Disease,** Albert Segaloff, M.D., New Orleans.

4:00 p.m. **Panel Discussion on the Current Concepts in the Use of Hormones.**

4:30 p.m. Adjournment.

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Information for Contributors

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Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet. Colored illustrations will be used when suitable if author assumes the actual cost.

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WASHINGTON

King-Anderson Defeated in Conference Committee

Health care for the elderly, King-Anderson or Gore-Anderson type—as the measure became known following passage of a Senate Amendment introduced by Senator Albert Gore, Democrat of Tennessee, was defeated in conference committee just before Congress adjourned on October 3.

The Congress adjourned *sine die* until January 4, 1965, unless it is called in special session prior to that time by President Lyndon B. Johnson.

The failure to pass health care for the elderly apparently prompted Senator Gore, to declare, "This means that the President will go to the people and ask a mandate on this issue."

The Senate approved a social security health care program by means of an amendment to the House-passed, H.R. 11865, by a vote of 49 to 44. However, since the House version did not contain such a provision, the bill was sent to a conference committee made up of five House members and seven Senate members.

The House conferees refused to accept the Senate version. As a result the bill was killed. For the first time in several election years a social security benefit and tax increase measure was not passed by the Congress. Because of the fact that the bill had contained an increase in monthly social security payments, Senator John J. Williams, Republican, Delaware, stated "The White House killed the payments increase, and this action demonstrates the political force of this administration's claim to an interest in the welfare or our elderly citizens."

By a vote of 72 to 15, the House approved H.R. 8546 which amends the Public Health Service Act and makes students of optometry eligible for loans under the Health Professions Educational Assistance program. That House action was then vacated and the Representatives gave their approval to a similar measure which had already been passed by the Senate, S. 2180. The finalized bill was sent to the President.

. . . Autumn is Exciting at Tan-Tar-A

The turn of the season brings flaming colors to the Ozark hills . . . and at Tan-Tar-A there's always something to do—or nothing to do, depending upon your mood. A friendly, efficient staff ready to pamper you or leave you alone.

A hike through the woods, loafing in the sunshine, golf, horseback riding, tennis, bowling, fishing (a heated fishing dock) . . . live entertainment and delicious food will round out a wonderful day at the most "Outstanding" resort in Missouri where "Casual Luxury" is the way of life.

A MID-WEEK vacation to get away from it all might be just the "ticket."

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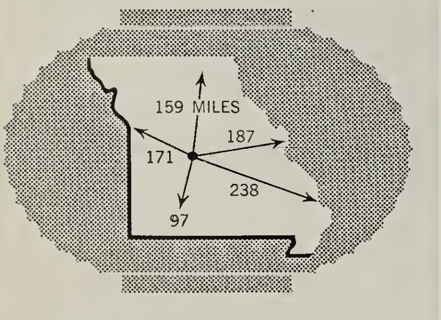

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Consider, when you see him next, the value of PATHILON® SEQUELS® with Phenobarbital, which provides sustained anticholinergic protection from spasm and pain in the target areas, as well as sustained phenobarbital action against triggering anxiety. The controlled release of the active ingredients in the SEQUELS® formulation means protective medication day and night.

Effective in peptic ulcer, intestinal colic, ileitis, esophageal spasm, spastic colon, alcohol-induced G.I. upsets, gastric hypermotility and anxiety neurosis with G.I. symptoms. Should be used as adjunct to other measures.

Side Effects (due to tridihexethyl chloride): dry mouth, blurring of vision, constipation.

Contraindications: urinary bladder neck obstruction; glaucoma; obstructive congenital anomalies of the gastrointestinal tract; pyloric obstruction; congenital megacolon; and stenosing gastric or duodenal ulcer with significant gastric retention.

Also available, without phenobarbital, as PATHILON® Tridihexethyl chloride SEQUELS® 75 mg.

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Each capsule contains: Tridihexethyl chloride, 75 mg., and phenobarbital, 45 mg.

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313-4

Across Missouri

The Missouri State Board of Healing Arts has announced revocation of the license of Virgil A. Bittiker, D.O., of Excelsior Springs. Doctor Bittiker is an officer of the Excelsior Medical Clinic, Inc. and was cited by the Board in connection with advertising which appeared in five general distribution publications.

The Board action came after two hearings, one in January and the second in July. In the final determination of the case two members, Raymond A. Ritter, M.D., and Harry S. Still, D.O., did not participate.

In its formal order on the case the Board held that advertising, such as was brought to its attention, "constitutes unprofessional and dishonorable conduct within the meaning" of the applicable state law.

Physicians in both St. Louis and Jackson County (Kansas City, Independence, et al.) will have an opportunity to vote for a member of their profession for the office of Coroner in the November general election.

In fact, Jackson County doctors will HAVE to vote for "one of their own" since both candidates are M.D.'s and members of the Jackson County Medical Society! Charles B. Wheeler, Jr., M.D., of Kansas City is running on the Democratic ticket after winning the primary election in which his strongest opponent was a D.O. The professional community and the *Kansas City Star* rallied behind Doctor Wheeler, and the Kansas City Medical Political Action Committee (KCMPAC) provided impressive support through financial contributions and campaign manpower. Many physicians used posters in their offices inviting their patients to vote for Doctor Wheeler. Running against him in the general election is Charles H. Pope, Jr., M.D., of Independence who captured the Republican nomination without opposition.

In St. Louis Robert Rainey, M.D., is running for the Coroner's job on the Republican ticket. His opposition from the Democratic side comes from the widow of the former Coroner. She was appointed to succeed her late husband and to fill his unexpired term of office. As the *St. Louis Post-Dispatch* observes editorially, "the only real issue . . . revolves around the qualifications of the candidates and their consequent attitudes toward the office." The newspaper leaves no doubt that in its opinion Doctor Rainey is the most qualified.

It's of interest to note that in both Jackson County and St. Louis the physician candidates are pledged to work for elimination of the office they are seeking! All three doctors have indicated that they favor abandoning the traditional coroner system in favor of a modern medical examiner plan.

The Director of Health and Hospitals for St. Louis, Frank P. Gilmore, M.D., has announced the appointment of a career Navy Medical Service Corps officer as his senior Hospital Executive. Moving into the post will be Capt. Paul L. Austin who is retiring from the Navy after 34 years of service. He is a native of Georgia, holds a B.S. degree from Southeastern University and is a graduate of the U. S. Naval School of Hospital Administration.

Edward W. Dempsey, Ph.D., Dean of the School of Medicine at Washington University, St. Louis, has been appointed the new special health and medicine assistant to the Secretary of Health, Education and Welfare. Doctor Dempsey, who is 53 years old, is a native of Iowa, received his Sc.M. and Ph.D. degrees from Brown University and taught for 12 years at Harvard Medical School before moving to Washington University in 1950.

M. Kenton King, M.D., has been named acting dean. He is a graduate of Vanderbilt University School of Medicine and joined the faculty of Washington University in 1957. Doctor King will serve until a new permanent dean is selected.

Eight Missouri physicians have been named recipients of grant-in-aid or fellowship awards

(Continued on page 948)

for the ulcer life:
a new strength of glycopyrrolate

ROBINUL® FORTE
2 mg. per tablet

ROBINUL®-PH FORTE
glycopyrrolate 2 mg. phenobarbital 16.2 mg. (warning: may be habit forming)

When glycopyrrolate was first introduced, clinicians were immediately impressed by the remarkable ability of this compound to exert a more specific pharmacologic action on the gastrointestinal tract than on other organ systems. For example, they often found that in difficult patients the dosage could easily be adjusted upwards to achieve the desired suppression of both hypertonicity and secretion . . . without paying the penalty of side effects intolerable to the patient. Thus, it is no surprise that many clinicians suggested that a double-strength 2 mg. tablet of glycopyrrolate would be both practical and useful. For those patients ordinarily unresponsive to anticholinergics or for those exhibiting the more prominent symptoms, the new Forte dosage forms are a worthwhile addition to your ulcer armamentarium.

BRIEF SUMMARY

INDICATIONS: In addition to its primary indications for duodenal and gastric ulcer, glycopyrrolate is indicated for other G-I conditions which may benefit from anticholinergic therapy. Robinul-PH Forte (glycopyrrolate 2 mg. with phenobarbital) is indicated when these situations are complicated by mild anxiety and tension.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte, sensitivity to phenobarbital.

PRECAUTIONS: Administer with caution in the presence of incipient glaucoma.

SIDE EFFECTS: Dryness of mouth, blurred vision, urinary difficulties, and constipation are rarely troublesome and may generally be controlled by reduction of dosage. Other side effects associated with the use of anticholinergic drugs include tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

DOSAGE: Should be adjusted according to individual patient response. Average and maximum recommended dose is 1 tablet three times a day: in the a.m., early p.m., and at bedtime.

See product literature for full prescribing information.

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C. G. STAUFFACHER, M.D., Secretary

Missouri Academy of General Practice

With its horns and whistles blasting and its stacks belching fire and smoke, the 1964 AAGP State Officers Conference Show Boat docked successfully at the Muehlebach Landing in Kansas City, Missouri, Saturday morning, September 19. Captain Julius Michaelson was at the wheel.

A lively greeting in true minstrel style, to the tune of "Waiting on the Levee" was presented with impresario, Steve Marshall, in charge. With his usual verve, he opened the doors for everyone to come aboard, adding that the accommodations were deluxe "with running water and commodious facilities for the ladies."

MAGP members, Baker, Gunn, Carrier, Shaw, McCraw, Finkel, Allen, Wyatt, Casebolt, Long, Ganley, Elliott, Stauffacher and McIntyre were right up front and went aboard along with AAGP members from all fifty states and Puerto Rico, to see and hear one of the "best shows" to be presented at the SOC in recent years.

The show was studded with stars, who promulgated plenteous, pithy points and timely truths. The first Act—"Protect Our Happy Home Father, There's Much Amiss Tonight!," was opened with Dr. Edward R. Annis, Past President of the American Medical Association, discussing "The Future of General Practice." Dr. Annis stated that it is difficult to speak about the future of general practice without knowing just what general practice—or, as he called it, a general specialist, actually is, as there are various types of general specialists, and like the general term "automobile"—there is a great difference between a Mack Truck and a Volkswagen. He said, "Medicine has changed greatly in recent years, and although the 'good old family Doctor,' of the past is gone, the Doctor who has the interests of his patients and his family at heart is still here." "A new student," he added, "must first learn to be a Doctor, then must decide whether he will be a specialist or a general specialist, and to be the latter, he must put out a little more effort than to be just a specialist." He commended the Academy on a job well done in upgrading knowledge and making continuing education available to the profession. He noted that the GP has no standing in most of the European countries, except Western Germany, and again, commended the Academy on its efforts to improve the image of the family physician.

Dr. Leland B. Blanchard, member of the AAGP Commission on Education, speaking on "The Importance of General Practitioners on Medical School Faculties," really laid it on the line. In summary, he said that we will not define ourselves and that the definition adopted at the 1963 Congress of Delegates was useless, especially in relationship to the training of a general practitioner; that it was impossible to develop a department of General Practice to train a man in a field that has no limits; that general practice was a field in itself, with problems peculiar to itself; and not a program of a little knowledge in a lot of specialities. However, general practitioners are vitally needed as part of medical school faculties, because all specialties are present and teaching, consequently; surgeons beget surgeons, obstetricians beget obstetricians and ad infinitum, but the GP is not there, which is mostly his own fault. He also, very emphatically stated that medical students want recognition when they complete their training and that to attract students into family practice, we must first, define general practice; second, provide graduate training or residency to provide that type of training and third, offer Board Certification for those completing this type of training that would be commensurate with Boards in the Specialities.

The other "performers" of Act I, Dr. Ben F. Banahan, Mead Johnson, Award Winner from Jackson, Mississippi; and Dr. Nicholas J. Pisacano, Secretary, AMA Section on General Practice, echoed Dr. Blanchard's remarks and re-emphasized the need for Board Recognition for the family physician.

After a luncheon intermission, which was ably presided over by Dr. Walter Sackett, Jr., acting as Maitre d'Hotel, Dr. Herman "Tiny" Drill, Chairman of the AAGP, Board of Directors presented a timely address along the same lines. The "audience" trooped back on the Show Boat for Act II, or, "Ply the Pump, Pauline, Our Crew Is Looking for the Leak," with the chairman of the various AAGP commissions reporting on their activities, past and present.

The Commission on Education reported most welcomely, that it, and the AAGP Board of Directors, have approved a new standard for acceptable study requirements, to consist of 150

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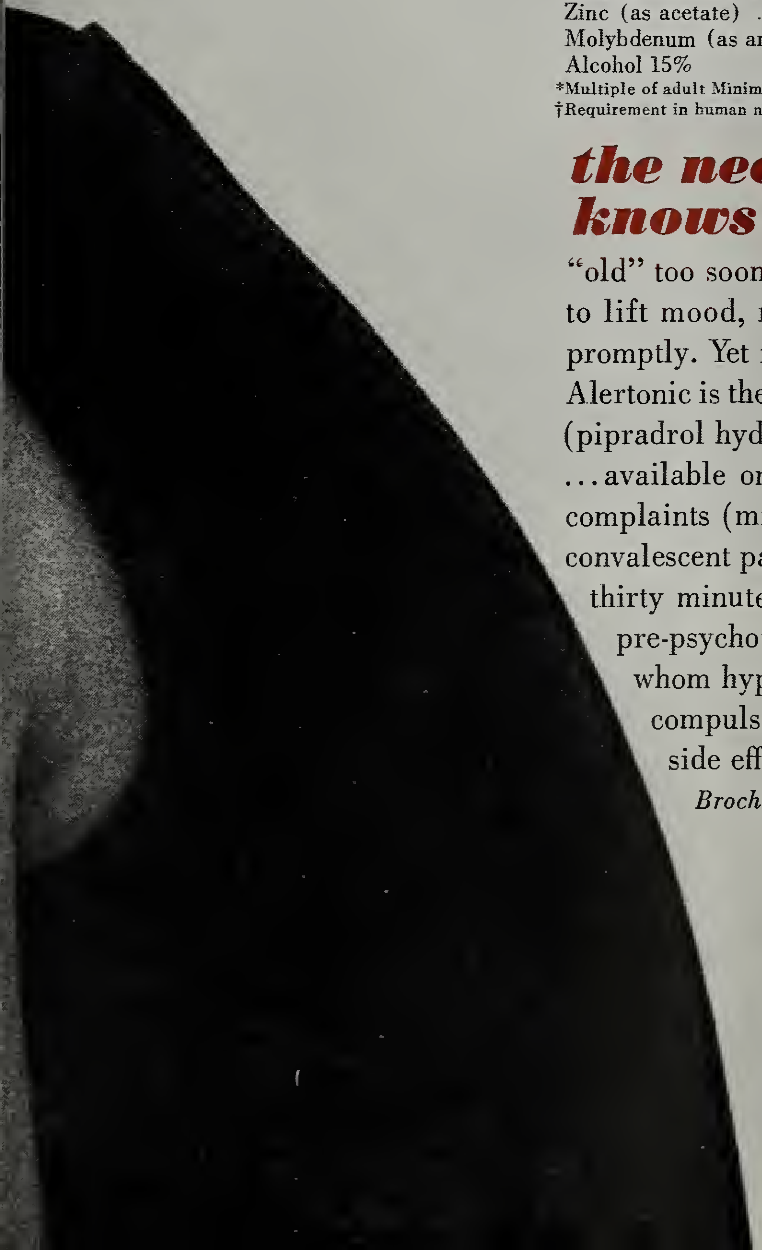

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Calcium glycerophosphate	(2% MDR for calcium and phosphorus)	100 mg.
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Alcohol 15%		

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the need for a tonic knows no age Anyone can feel tired and "old" too soon. In such functional fatigue, Alertonic helps to lift mood, revive interest, restore purposeful activity promptly. Yet it contains no MAO inhibitors, no hormones. Alertonic is the effective formulation of a cerebral stimulant (pipradrol hydrochloride), alcohol, vitamins, and minerals ...available on prescription *only*. For common functional complaints (mild mood depression, tiredness); geriatric or convalescent patients, Rx one *tablespoonful* Alertonic *t.i.d.*, thirty minutes before meals. Contraindicated in agitated pre-psychotic patients, paranoia, or other patients in whom hyperexcitability, anxiety, chorea, or obsessive-compulsive states are present. Mild central stimulant side effects may occasionally occur.

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Representative Tom Curtis of Webster Groves speaks to the group.

hours over a three year period, which must include study hours obtained by attending at least one State Assembly or one AAGP Assembly, during these three years unless specially excused, in writing, by State Committee of Education. A list of meetings at which acceptable study hours may be obtained will be published yearly and will include all medical school post-graduate courses, all county, state and national medical society meetings, staff meetings, and any other meetings cosponsored by an Academy of General Practice, or any other meetings which could be approved by application to the AAGP Commission on Education for approval. This to be effective January 1, 1965. This, in essence, is identical to the resolution that the MAGP presented at the 1963 Congress of Delegates in Atlantic City.

John Parker, President of the SAMA, spoke and again emphasized that the GP was not being heard during the student's medical training and emphasized that preceptorships were most desired, added a plea that the embryo doctor's wife should also be present so that she might be acquainted with what to expect as a GP's wife. He also stressed that post-graduate training, leading to Board Certification is desired by most students if they are to go into General Practice.

After a short intermission, the show continued with Small Group Side Shows (one for each commission) where the audience had an opportunity to get in their "two bits worth" or their "four bits worth," depending on the verbosity of the speaker.

The curtain then came down on Act II following the premiere showing of the new Academy Membership Film, entitled "Doctor for the Family"—a very professionally done film, the purpose of which is rather nebulous.

The intermission between Act II and Act III took place Saturday evening with Iced Punch and Magic Elixirs being served in the Trianon Room followed by Assorted Delicacies to Please the Epicure in the Terrace Grill.

Act III was Master of Ceremonies by "Commodore Amos Johnson" and was billed as, "He Ain't Done Right by Nell," a high-class melodrama (very mellow), moral and refined: A clean performance—with happy, lilting, close harmony provided by "The Beaconaires" and music by Al Rupf's Grand Double Orchestra—talented and sober.

This presentation was especially well received by the audience, particularly those who had earlier apparently imbibed more heavily of the "Magic Elixirs" than the "Iced Punch," and who alternately, vociferously accoladed the heroine or hissed the villain in a manner that was neither talented nor sober.

Surprisingly enough, after an evening dedicated to Magic Elixirs, and Iced Punch, the audience was all present when the curtain went up on Act IV at 9:00 a.m. the following morning. The final Act—"Hold Your Head on High, Hector, for Virtue Always Triumphs" was a fitting grande finale to a great show.

The performers and the performance were superb and consisted of "Immutable Moral Values" by Charles E. Whittaker, Associate Justice of the United States Supreme Court; "A Congressman Looks at Current Legislation" by The Honorable Thomas B. Curtis, well-known Congressman from St. Louis; "The AMA Looks at Current Legislation," by Dr. Ernest B. Howard, Assistant Executive Vice-President, AMA, and "The Academy's Position in Organized Medicine," by R. B. Robbin, M.D., Camden, Arkansas, Past President of the AAGP.

All these presentations were excellent, informative, and pithy, but space limits adequate summaries of all of them.

However, the remarks of Justice Whittaker

(Continued on page 948)

Missouri Academy was well represented by Officers and Board members.

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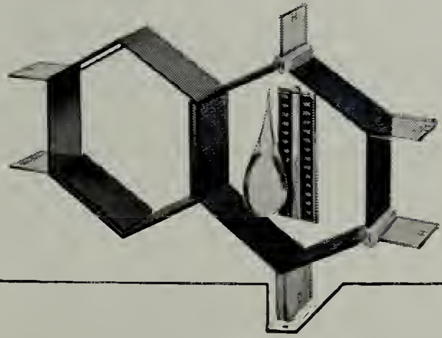

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INDICATED in hypertension with or without edema, and in all types of edema involving salt retention. May be helpful in some cases of lymphedema, idiopathic edema and edema due to venous obstruction.

SIDE EFFECTS: Skin rash (rare), gastrointestinal disturbances, weakness and dizziness, seldom so severe that drug should be stopped. Generally, the adverse effects sometimes associated with the thiazide diuretics are possible. Pre-existing electrolyte abnormalities may be aggravated.

CONTRAINDICATION: Anuria.

1. Steigmann, F., and Griffin, R.: Evaluation of Quinethazone, a New Diuretic. J. Amer. Geriat. Soc. 11:945 (Oct.) 1963.

2. Schwartz, M.: Office Evaluation of a New Diuretic in Patients with Hypertensive Diseases. Scientific Exhibit Presented at the Clinical Meeting of the American Medical Association, Los Angeles, California, Nov. 25-28, 1962.

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8370-4

Woman's Auxiliary

I wish I might write this article immediately following the Fall Conferences, because I am sure I would have many more interesting things to tell you than I do now! However, since this must be in the State Office a month in advance, so they can get things set up for the printers, it is impossible. Anyway, I am sure when you read this I shall have returned from the National Fall Conference in Chicago, and you will have returned from Tan-Tar-A, inspired to do our all for our Auxiliary this year—inspired by the fine speakers you have heard, the friendly warmth of the discussions with other doctors' wives with similar problems, and the beauty of the Ozarks in autumn. At least I hope this is true.

Mrs. R. W. Bohnsack

We were especially glad to have Mrs. Chester L. Young, our National Regional AMA-ERF Chairman, Dr. Leonard T. Furlow, President, and Mr. Tom O'Brien, Executive Secretary of the MSMA, as well as our own Betty Sutter, National President-Elect, along with our other Past-Presidents. And, of course, we couldn't have had the meeting without all of you loyal Board members. Thank you all so much for coming!

Hats off to the members of the Fifth and Sixth Districts who did such a bang-up job planning the Fall Conference, and especially Betty Durst, Fern Ritterbusch, Audrey Boger, and Jane Stewart who spear-headed the whole bit! Thank you all from the depths of my heart!

Now we must get about this thing of being good ambassadors for our husbands and trying to create for ourselves and our posterity a "BETTER HEALTH—BETTER WORLD," Mrs. Evans' wonderful theme for this year. Your Community Service is such an important way of showing the world your interest and determination to carry out this theme.

I can't think of a better way to do this than to work hard on our International Health Activities project. What a wonderful Christmas you may be giving with your sample drugs, instruments, medical journals and textbooks, which will help someone to help others. Don't forget to save them and send them! Ask Virginia Muench where, if you don't know.

Of course, everyone will be stressing *legislation* this election year—this election month, to be exact. Keep those letters going to your Congressmen! There just can't be too many. Maybe we'll make an impression some day—as though we hadn't already!

We have another important election this month, too, when our own Ruth Kelling becomes President of Southern in Memphis, November 17. I hope so much to be there. Our sincere love and congratulations, Ruth!

I am hoping you are stressing AMA-ERF, too, this year. This is another way for that "BETTER HEALTH-BETTER WORLD" theme, helping deserving medical students to further their health careers so that they may, in turn, help others. I can't refrain from thinking what a big help it would have been to us when we were in Medical School! Maybe we wouldn't have had to wash so many wind-shields, fill so many gas-tanks, give so many piano lessons, or eat so many beans and frankfurters!

Above all, I am sure that *safety*, especially on the highway, is uppermost in our minds this year, but don't forget home safety, farm safety and, in this hunting season, gun safety. There are many fine films you can show on these things for your programs—both interesting and instructive. Your source of information is, of course, the National Auxiliary Headquarters at 535 N. Dearborn, Chicago, Illinois.

Now that our daughter, Nancy, has moved to Rochester, N. Y., our son, Jim, is about to finish his football season, Carol is happy and doing well at K. U., and my dear husband doesn't object to eating sandwiches and watching the dust accumulate, I shall concentrate on Auxiliary! If there is any way I can help you, please write me —for I *know* I'll be calling on *you* to help *me*!!

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Cardiovascular Diseases Mortality Patterns Among Middle-Aged White Males in Missouri

Coronary heart disease and the other cardiovascular diseases are no longer attributed solely to the aging process. It is now believed that environmental factors play a large part in the etiology of these conditions, even though there is a need for more precise identification of these factors. One approach is the examination of geographic differences in both morbidity and mortality, and factors associated with such differences.

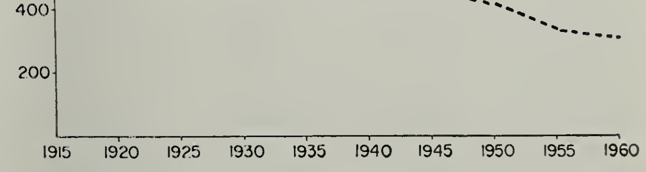
In the last 40 years there has been a substantial decrease in national death rates for the cardiovascular-renal diseases for white females age 45 to 64, while those for white males have shown a marked increase from 1920 to 1950, with a leveling off in the last decade (fig. 1).

A somewhat similar trend has been observed for all causes of death, and Missouri rates also show a long-term trend similar to those for the United States. In view of the limited amount of medical information and aids for the diagnosis of coronary heart disease in existence half a century ago, and in view of the fact that diagnostic resources gradually became available to physicans, death certificates cannot be expected to produce meaningful death rates for coronary heart disease over the earlier part of the past fifty years.

Substantial differences in the rates for middle-aged individuals have been observed between geographic areas within the United States[4, 5] and are even more marked between the United States and some of the countries of Western Europe.[6] This generalization applies to all cardiovascular diseases combined and also to all causes, as well as to coronary heart disease. Thus, the study of differences in death rates from one geographic area to another becomes an epidemiological tool for the study of coronary heart disease and other cardiovascular diseases. This approach has been used to note geographic differences in the prevalence of dental caries, thyroid disease and other conditions which are affected by specific environmental factors.

Present Study

Those living in Missouri are particularly concerned with the question: How do Missouri rates



Source: References 1, 2 and 3

Fig. 1. Cardiovascular-renal diseases death rate per 100,000 population.

Crude death rates, for all ages, are high because of the high proportion of elderly people in Missouri. However, for rural Missouri, white men from ages 45 to 64 have low rates for deaths from all causes, for all cardiovascular diseases combined, and for coronary heart disease alone. Exceptions are above average rates in a few counties along the Mississippi River and Southeast Missouri.

Metropolitan areas in Missouri also have rates higher than most rural areas, but lower than the average for similar metropolitan areas elsewhere in the United States.

Low rate areas in Missouri may be studied more intensively, along with specific high rate areas elsewhere, to discover differences between these areas which may be responsible for differences in death rates. For such purposes there is a need to prepare death certificates as accurately as possible, with special attention to the underlying cause of death.

Mr. Sauer is from the Ecology Field and Training Station, Health Disease Control Program, U. S. Public Health Service; Dr. Banta is with the Peace Corps, formerly Field and Training Station, and Mr. Marshall is with the Missouri Division of Health. The authors are also members of the Department of Community Health and Medical Practice, School of Medicine, University of Missouri.

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compare with those for other states, and what is the pattern of rates for various parts of the State of Missouri?

Crude death rates for Missouri, especially for the cardiovascular diseases and for all causes[7] are among the highest in the United States. This is because of the high proportion of old people in Missouri and, to some extent, because there are two major metropolitan areas that lie largely within the state. For many purposes these rates are meaningful because they give an indication of the relative impact of a disease and cause of death upon communities without regard to age. Crude figures are significant when considering the types of services which may be needed for a specific area. For example, the number of deaths from stroke in a county is of concern to county residents interested in providing adequate rehabilitation facilities though such excess deaths may be due primarily to an adverse age distribution within the county.

Methods

This study deals with death rates among the middle-aged—more specifically for white males age 45 to 64, because these rates are now particularly high as compared with white females of the same ages (fig. 1).[8] Furthermore, rates among this group show marked geographic differences.

From a public health point of view, deaths in this group are of concern because they are premature. From a scientific viewpoint, mortality data on the middle-aged tend to be more specific and more accurate than for older people.

Rates are given for large areas of the state, specifically the metropolitan areas and the state economic areas, as defined by the Bureau of the Census. Four metropolitan areas are so defined, and we have classified Joplin—Jasper County as a metropolitan area because its population is in excess of 75,000. Non-metropolitan counties which are to a substantial extent similar in type of agriculture or the way in which people earn their living have been grouped together by the Bureau of the Census and designated as State Economic Areas; there are nine such areas in Missouri (fig. 2).

Death rates for the heavily populated counties are also presented for age groups 35 to 74 (table 2). By using such a broad definition of "middle age," there is a reduction in chance fluctuation

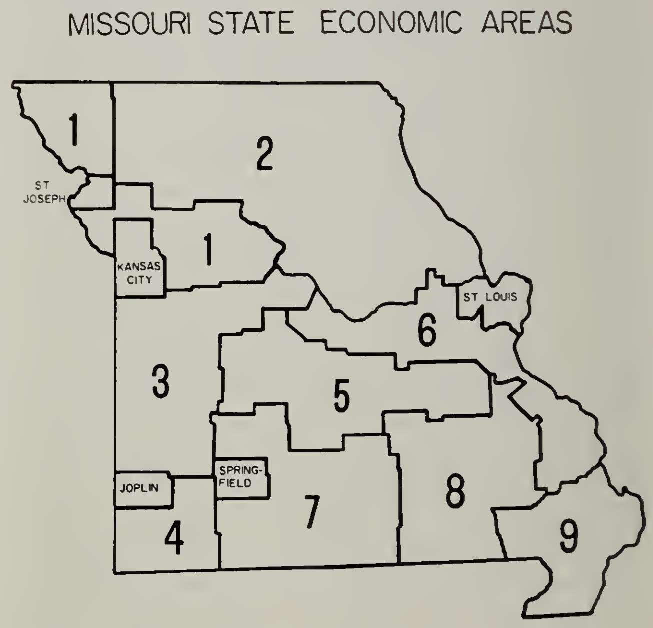

Fig. 2. Missouri state economic areas.

or random error; this is particularly important for the counties of moderate sizes. Both sets of rates, age 45 to 64, and age 35 to 74, have been age-adjusted by the "direct" method,[9] by 10 year age groups, to the United States total population in those age groups in 1950. In this way, differences in the age distribution from one county to another will not affect the rates. For those counties with a population of less than 23,000 (1960 census) no rates are given, in part, because random error may be expected to be rather large.

Standard vital statistics procedures have been used for tabulating and computing death rates by usual county of residence, regardless of the county in which the death occurred. Deaths which occurred during the 10 year period, 1950 to 1959, were used to compute the average annual death rates. Broad categories of causes of death have been used, such as deaths due to all cardiovascular diseases combined; this includes all forms of arteriosclerotic heart disease, all hypertensive disease, stroke, general arteriosclerosis and all other forms of cardiovascular disease. Special emphasis is placed upon "coronary heart disease," which is defined as including all deaths in the category "arteriosclerotic heart disease, including coronary disease, International Statistical Classification Code 420." This category includes all deaths entered as due to coronary occlusion, infarction of the myocardium or ventricle, ischaemic heart disease, coronary embolism, aneurysm of heart and cardiac thrombosis.

RESULTS

For middle-aged white males, death rates are lower among Missouri residents than for the entire United States (table 1). For the United State, as a whole, the non-metropolitan or rural areas have lower rates than do the metropolitan areas. This is also true for the State of Missouri. The Missouri rate is higher than the rate for any

TABLE 1

DEATH RATES FOR SELECTED CAUSES, FOR WHITE MALES AGE 45-64, BY STATE ECONOMIC AREA AND METROPOLITAN AREA, MISSOURI, 1950-1959

(Average annual death rate per 100,000 population, age-adjusted, direct method, by ten-year age groups to the total United States population age 45-64 in 1950. Deaths tabulated by county of usual residence, by State Division of Health.)

	Diseases of the Cardiovascular System (International List Number 330-334, 400-468)				
State Economic Areas	TOTAL CARDIO-VASCULAR	CORONARY HEART DISEASE (420)	ALL OTHER CARDIO-VASCULAR	ALL CAUSES EXCEPT CARDIO-VASCULAR	ALL CAUSES
UNITED STATES	819.0	559.3	259.7	678.4	1497.4
STATE OF MISSOURI	745.1	488.8	256.3	686.2	1431.3
Non-metropolitan counties	661.4	427.7	233.7	581.7	1243.1
1. Northwest	638.4	410.9	227.5	557.1	1195.5
2. Northern	641.9	422.9	219.0	574.5	1216.4
3. West Central	602.4	395.9	206.5	521.9	1124.3
4. Southwest*	671.9	444.9	227.0	569.2	1241.1
5. Northern Ozark Plateau	633.2	390.0	243.2	580.3	1213.5
6. Northeast Ozark Border	654.9	425.7	229.2	508.3	1163.2
7. Western Ozark Plateau	604.7	392.4	212.3	525.9	1130.6
8. Eastern Ozark Plateau	677.0	422.5	254.5	609.9	1286.9
9. Southeast (Mississippi Delta)	758.4	474.0	284.4	676.9	1435.3
Metropolitan Counties	820.5	544.0	276.5	780.7	1601.2
Kansas City (Jackson-Clay Counties)	829.1	588.9	240.2	788.4	1617.5
St. Louis Metropolitan Area (in Missouri)	821.8	524.4	297.4	799.1	1620.9
St. Joseph—Buchanan County**	891.6	592.0	299.6	745.9	1637.5
Springfield—Greene County	724.7	512.1	212.6	580.6	1305.3
Joplin—Jasper County	919.3	609.8	309.5	902.9	1822.2

* Excluding Joplin—Jasper County, which in this table is defined as a "metropolitan area."
** Population in large resident institutions excluded for purpose of computing rates.

other state in the West North Central States,[8] but this appears to be due to the presence of large metropolitan areas within the state. The non-metropolitan areas in Missouri have rates which generally compare favorably with those of other states of this region.

Metropolitan Counties

Jasper County, including the city of Joplin, has the highest death rate among the counties of Missouri for white males, age 45 to 64, not only for coronary heart disease, but also for all cardiovascular diseases combined and for all causes (table 1). The portions of the metropolitan areas of Kansas City and St. Louis which lie in Missouri also have above average rates, higher than those of any of the rural areas. This is to be expected since large metropolitan areas ordinarily do have higher death rates as compared with rural areas. However, as compared with other major metropolitan areas in the United States in 1949 to 1951, the Kansas City and St. Louis metropolitan areas had two of the lowest death rates.

St. Louis City is administratively separate from St. Louis County, thereby making it possible to compute rates for each separately. For all causes and also for all cardiovascular diseases, St. Louis City had death rates substantially higher than for any county in the state. Similar data are not available for Kansas City, since it is administratively part of Jackson County. Clay County is part of the Kansas City metropolitan area, while Jefferson, St. Charles and St. Louis counties are part of the St. Louis metropolitan area. Crude death rates for these counties are low because of the high proportion of young married adults and their children in these counties. The age-adjusted age-specific rates for ages 35 to 74 for the suburban counties as a group are definitely lower than for the center-city counties, and are similar to those for non-metropolitan counties generally (table 2).

Southeast Missouri

The seven counties in the Southeastern portion of the state, which constitute state economic area 9, is part of the Mississippi Delta area. This area has rates lower than those for the major metropolitan areas of the state, but higher than for any of the other rural portions of the state. This is not unexpected as the Mississippi Delta economic subregion, extending from Southeast Missouri to the Gulf of Mexico, had above average rates in 1949 to 1951. All of the seven Southeast counties are among the fifteen highest-rate

TABLE 2

DEATH RATES FOR SELECTED CAUSES, WHITE MALES AGE 35 TO 74, FOR SELECTED COUNTIES, MISSOURI, 1950-1959

(Counties selected with total population 23,000 and over in 1960. Average annual death rates per 100,000 population, age-adjusted by the direct method by ten-year age groups to the total United States population age 35-74 in 1950. Deaths tabulated by county of residence, by State Division of Health.)

County	*Cardio-vascular diseases*	*Coronary heart disease*	*All causes*
United States	870.2	554.7	1543.8
State of Missouri	808.7	486.5	1481.8
Metropolitan counties	884.2	547.9	1653.3
Non-Metropolitan counties	734.8	427.7	1315.9
Audrain	610.8	349.1	1152.2
Boone	717.5	446.3	1249.4
Buchanan—C	947.4*	586.7*	1637.3*
Butler—SE	844.5	460.4	1509.4
Callaway	629.5*	334.5*	1274.5*
Cape Girardeau	790.9	428.3	1313.4
Cass	648.8	394.9	1139.2
Clay—S	745.2	497.5	1278.5
Cole	807.0*	504.8*	1343.7*
Dunklin—SE	909.2	511.3	1573.6
Franklin	752.6	447.4	1334.5
Greene—C	813.5	520.5	1385.4
Jackson—C	902.0	594.0	1705.5
Jasper—C	962.7	592.4	1823.3
Jefferson—S	767.0	470.4	1393.9
Johnson	721.4	452.2	1263.3
Lafayette	759.6	493.6	1304.0
Lawrence	711.7	410.1	1285.2
Marion	904.7	584.7	1560.6
New Madrid—SE	854.4	393.7	1585.0
Newton	738.4	448.3	1381.3
Pemiscot—SE	874.8	462.1	1617.4
Pettis	819.4	484.9	1399.1
Phelps	742.1	414.8	1406.7
Platte	700.1	460.9	1243.6
Pulaski	794.4	458.7	1361.6
St. Charles—S	809.0	504.0	1405.4
St. Francois	872.3*	535.2*	1575.0*
St. Louis County—S	700.6	436.2	1304.2
St. Louis City	1018.5	600.4	1965.0
Saline	699.0	407.4	1266.2
Scott—SE	845.7	466.0	1495.2
Stoddard—SE	773.9	409.9	1325.6

SE—South East Missouri—Mississippi Delta Counties.
C—Center—city metropolitan counties, arbitrarily including Jasper County.
S—Suburban metropolitan counties.
* Population in large resident institutions excluded for purpose of computing rates.

counties in the state; six of these counties are large enough to be included in table 2, and are identified by "SE" following the name of the county. These rates are for white males only; if the nonwhites were included, they would be still higher, and the contrast between these and most other non-metropolitan counties in the state would be greater.

Remainder of State

The remaining eight non-metropolitan state economic areas show little variation. The difference is, in general, less than 15 per cent from the highest to the lowest, and all areas have rates lower than Springfield–Greene County, which is the metropolitan area with the lowest death rate in the state. In other words, with the exception of Southeast Missouri, each of the rural state economic areas has a lower death rate than the lowest of the metropolitan areas.

Rates in individual non-metropolitan counties outside Southeast Missouri vary substantially without showing an easily discernible pattern. Audrain and Callaway counties have the lowest rates among the larger counties shown in table 2, but some of the more sparsely settled counties in Southwestern and Northwestern Missouri have equally low rates. In general, these more populous counties have death rates reasonably close to the average for the non-metropolitan counties as a whole. Only Marion and St. Francois counties have fairly high death rates, similar to those for the counties of Southeast Missouri.

Age and Sex-Specific Rates

When a high death rate area such as St. Louis City or Jasper County is compared with the low death rate areas such as state economic area 3, it is apparent that the marked differences occur almost entirely in middle-age (fig. 3). It may be inferred from this figure that the factors (whatever they are) producing differences in middle-aged death rates do not appear to be operative in younger adults or in extreme old age to any appreciable extent.

In the 45 to 64 age groups, the white male death rates for coronary disease are roughly four times those for the white females of the same age, and for all cardiovascular diseases combined the male rates are consistently more than double the female rates. Yet, between geographic areas the same general pattern of rates exists for both sexes. That is, St. Louis City has the highest rates and Jasper County has rates higher than any other county. Similarly, the rural areas usually have rates lower than any of the metropolitan areas, and Southeast Missouri has the highest death rate for any of the rural areas for white females as well as for white males. However, the contrasts for white females are not as marked and are not quite as clear-cut as for white males.

Discussion

We realize that it is often difficult for physicians, when called in for a terminal illness or in many other difficult diagnostic situations, to determine the underlying cause of death. The physician who fills out the death certificate is required to express the best clinical judgment he can at the time the death certificate is signed. Though at times he must make this judgment without as much diagnostic information as he wishes, his determination is certainly superior to that of a non-medical person.

Most such diagnostic problems fall within the area of cardiovascular diseases as a group so that available evidence[10] indicates that the death rates for all cardiovascular causes combined are more accurate and more nearly comparable than those for coronary heart disease alone. The amount of scientific data available to make this judgment is somewhat limited.

In making a determination of the cause of death, the role of "fashion" in vocabulary does not appear to be marked; in fact, the problem is in many instances the opposite. That is, the areas with high death rates for cardiovascular causes

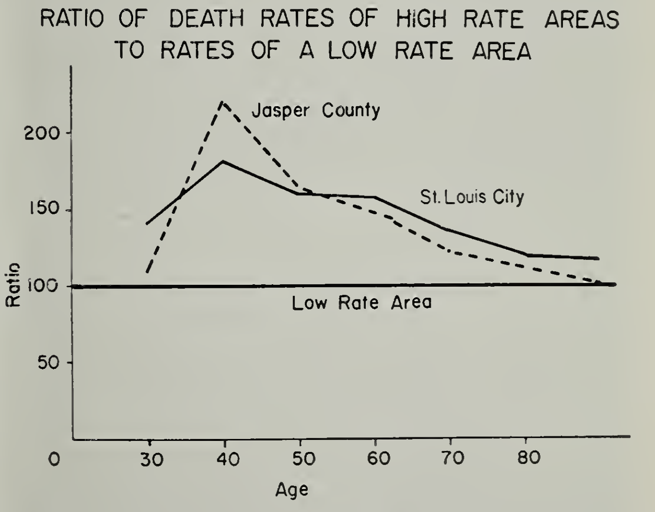

Fig. 3. Ratio of death rates of high-rate areas to rates of a low rate area—specifically of age specific white male rates for the cardiovascular diseases for St. Louis City and Jasper County as compared with rates for state economic area 3. (For each age group, the death rate for state economic area 3 is set as equal to 100.)

also have high death rates for non-cardiovascular causes and vice-versa. This is likewise true to a substantial extent for a comparison of coronary heart disease and other cardiovascular diseases. For the nine non-metropolitan state economic areas, the correlation between the cardiovascular diseases death rates and the non-cardiovascular death rates is $r = +.95$. This indicates that whatever is responsible for variation in the cardiovascular diseases death rates also operates in a way to produce similar differences in rates for the group of non-cardiovascular causes.

At first, this observation seems most amazing and unbelievable and yet, on further thought, it is easier to accept. For example, present hypotheses and limited data indicate that there may be a number of factors contributing to the risk of death from cardiovascular diseases, such as obesity, exercise, hypertension, community air pollution and cigarette smoking. These factors have also been implicated with increasing the risk of dying from various specific non-cardiovascular causes, such as pneumonia, other respiratory diseases, diabetes and malignant neoplasms. It is possible that this parallel may be related to etiologic factors, in part at least.

Ethnic origin may contribute to differences in death rates, but so far available evidence does not support a belief in marked differences.[5] For example, the counties of heavily German ancestry, such as Maries and Gasconade have roughly average death rates. And migration within the United States does not appear to have a marked effect.[5] Missourians who had moved to other states had coronary heart disease death rates similar in 1950 to the rates of the states to which they moved. Current studies are exploring the accuracy of age, the precision with which residence allocation has been made, and various other factors but, as yet, there has been little evidence to provide a basis for challenging the validity of available data.

Some differences in death rates present challenges for further study. Counties containing large cities all have high death rates, while rural or non-metropolitan areas generally have fairly low rates. Exceptions in Missouri include Southeast Missouri, and Marion and St. Francois counties, all of which are along the Mississippi River. Yet these areas do not have high rates when compared with some of the non-metropolitan areas of the southeastern United States or the Pennsylvania anthracite area.[5]

Some of the similarities also present challenging opportunities for study. For example, in rural areas, economic status itself does not appear to produce differences in death rates. The prosperous rural areas in northern and western Missouri have consistently low death rates, as do the Great Plains farming area generally, from West Central Texas to Minnesota. Yet the Ozark Mountain areas of Missouri also have low rates, and so do the Southern Blue Ridge areas in the Appalachians, even though their per capita income is quite low.

The major differences appear to be real enough. However, the role of various factors is not known; some of them are undoubtedly in the social environment and some in the physical. Many of these deserve further careful examination, and to do this adequately, there is a need to maintain and increase standards of accuracy of data collecting in many ways. Physicians are needed to direct and participate in special studies to measure the level of accuracy of cause of death. Equally important is the recognition that: All physicians who certify the cause of death as accurately as possible are thereby contributing to the epidemiologic study of the diseases causing high death rates—particularly in middle-aged males.

Summary

1. Rural Missouri death rates are generally low for middle-aged whites, the major exception being the slightly above-average rates in Southeastern Missouri. However, Missouri crude death rates, all ages, are high because of the high proportion of elderly people in the population.

2. Metropolitan Missouri death rates for middle-aged individuals are higher than those for the rural areas, but are below the average for similar metropolitan areas elsewhere in the United States.

3. Those areas with low death rates may be studied more intensively for factors associated with lower rates as compared with substantially higher rates in other specific parts of the United States. These factors may include local environmental hazards such as air pollution, water supplies, food sources and radiation effects as well as social environment and genetics. For such purposes there is a need to prepare death certificates as accurately as possible, with special attention to the underlying cause of death.

Acknowledgment is gratefully made to the work done by the University of Missouri Computer Center, the National Institutes of Health computer staff and also by Mrs. Jean Pekover, Mrs. Paula Littleton, and Mrs. Hannah Rickman, which has made this study possible.

(Continued on page 929)

I. CHARLES FOWLER, M.D., *N. Kansas City, and*
CHARLES E. WORKMAN, M.D., *Kansas City*

Aneurysm of the Ulnar Artery Due to Blunt Trauma of the Hand

Aneurysm of the ulnar artery is a rare tumor of the hand. The history of a mass appearing after an injury with a murmur present over the mass and successful resection of the aneurysm is reported.

Tumors of the hand are always interesting and the hand is the site of a great variety of tumors. The most common tumor of the hand is a ganglion.

The diagnosis of a hand tumor is ordinarily not difficult, although the final diagnosis frequently rests on exposure of the surgical lesion and the microscopic report.

Hand tumors are preferably treated by surgery and the surgeon who operates on hand tumors should be familiar with the detailed anatomy of the hand. Since the hand is a complicated structure, the hand may be badly damaged by incisions which inadvertently divide tendons or nerves.

Some idea may be gained as to frequency of the various tumors of the hand from Mason's analysis of some 700 tumors.[1] Of these tumors, approximately one third were ganglia. Another third were made up of four tumors in about equal numbers--xanthomas, epidermoid cyst, angiomas and irradiation carcinoma. One sixth was made up of carcinoma (not developing on the basis of irradiation), lipoma, fibroma, neuroma and chondroma, again in approximately equal numbers. The remaining one sixth comprised the remainder of the hand tumors; synovioma, glomus tumor, fibrosarcoma, giant cell tumors, osteosarcoma, osteoma, Ewing's tumor, ostèoid osteoma, lymphangioma, sweat gland carcinoma, myxoma, leiomyoma, metastatic tumors.

It is the purpose of this paper to describe a patient presenting a tumor of the hand with an aneurysm of the ulnar artery. Traumatic aneurysms, developing as a result of trauma, probably are the commonest type of aneurysms of the hand. They are felt to be due to weakening of the arterial wall by blunt force and subsequent aneurysmal dilitation.

Lyle[2] reported 61 cases of aneurysm of the hand in literature up to 1924 and Vohlmann in 1930 reported on a series of 67 cases. The superficial palmar arch is said to be the most common site. The aneurysmal sac, in the reported cases, has varied from the size of a pea to that of an apple and appeared in a period of from 12 hours to five months after the injury. A systolic murmur is commonly heard over the sac but thrills are

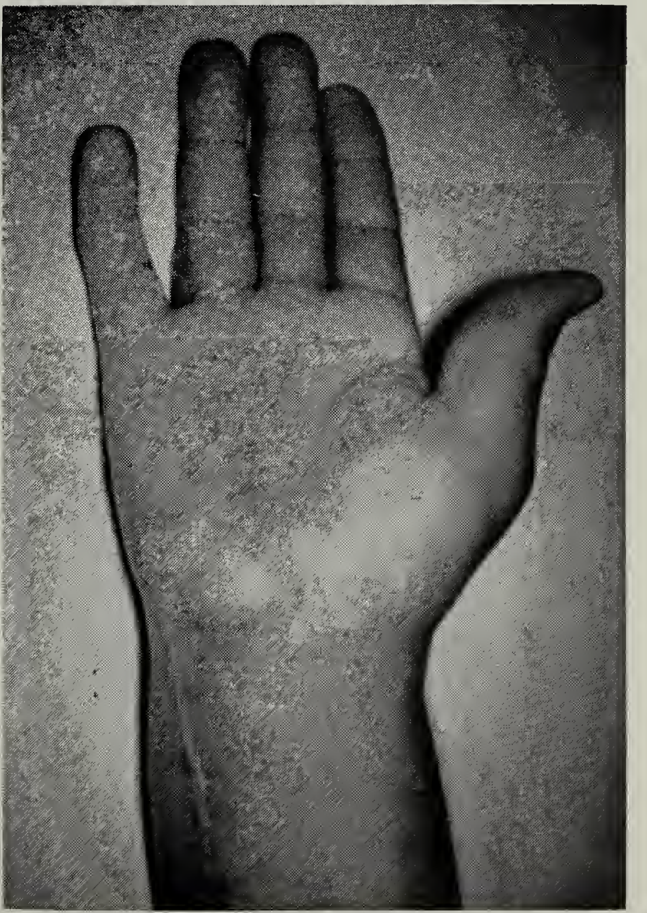

Fig. 1. Photograph showing postoperative hand function, still tender at site of surgery but patient doing heavy manual labor.

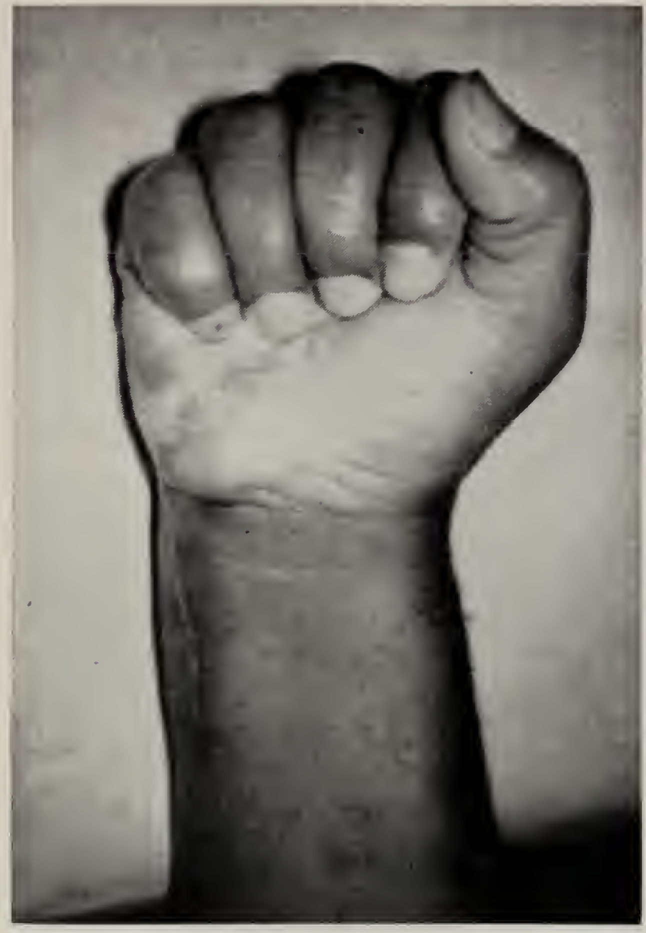

Fig. 2. Postoperative photograph.

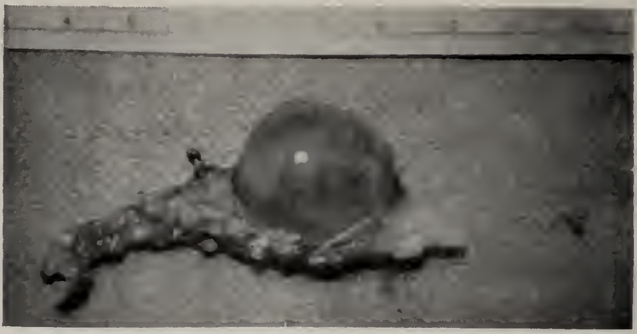

Fig. 4. Aneurysm after surgical removal.

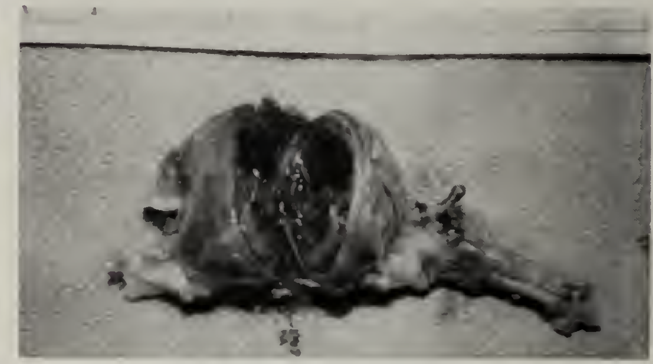

Fig. 5. Note laminated fibrin and clot.

rare. Radical excision is preferable to ligating the vessels that enter and leave the sac. Arteriovenous fistula may be confused with aneurysm and may be either congenital or traumatic in origin. Cardiovascular symptoms are usually absent when the arteriovenous fistula is in the hand

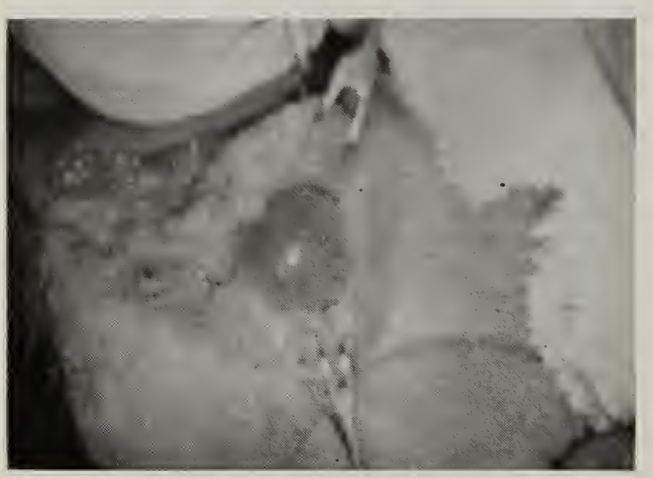

Fig. 3. Surgical exposure of aneurysm, ligated proximally and distally resected. There was no recurrence in one year follow-up.

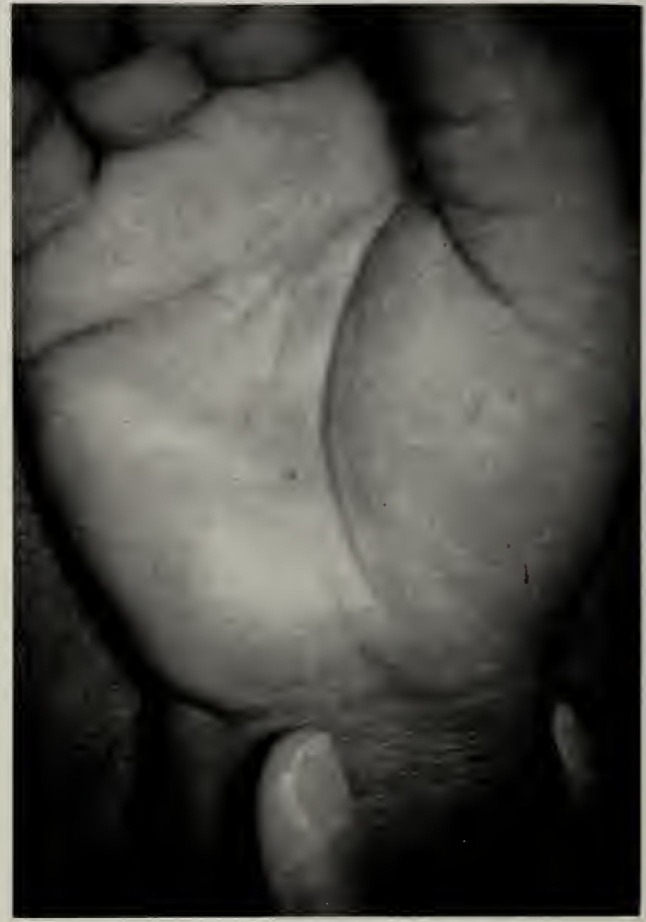

Fig. 6. Mass in hypothenar eminence, firm, about size of a walnut.

or the finger due to the smaller amount of blood that usually passes through these fistulas.

A Negro male, aged 40, who was employed by a paint company gave a history of injuring his right hand several weeks previous to examination while moving some skids. There was no penetration injury. The patient's complaint, since the injury, was that of pain in the hand and swelling. A murmur was detected at the site of the aneurysm.

Physical examination was essentially normal except for the hand which showed a normal range of motion in the wrist and hand. There was, however, a tumor mass approximately the size of a small walnut present on the flexor aspect of the hypothenar eminence (fig. 1). This was tender, well demarcated and had not subsided in two weeks. Patient was observed for a period of several weeks; however, the tumor mass did not subside. It became more painful and the patient was admitted for surgery.

On April 26, 1963, the patient was taken to surgery. Operating under tourniquet, an L shape incision was made over the hypothenar eminence and up on to the forearm. Upon exposing the tumor mass (fig. 2), it was apparent that this was an aneurysm and the ulnar nerve and ulnar artery were traced into the mass through normal tissue. It was possible to separate all the branches of the ulnar nerve from the wall of the aneurysmal sac and the artery was ligated three times proximally and distally. The wound was closed in anatomic layers.

Pathological report is as given:

Gross Description.—The specimen submitted for examination consists of a segment of ulnar artery with a small amount of attached soft tissue. The specimen measures 6.0 cm. in length (figs. 3 and 4) and has a maximum diameter of 2.2 cm., due to the localized aneurysmal dilatation of the artery in the central zone. Laminated fibrin and blood clot are found within the aneurysm. (fig. 5). Sections are taken for microscopic evaluation.

Microscopic Examination.—Sections of the mass removed from the hypothenar eminence in the subcutaneous zone and within the right hand, show the presence of an aneurysm arising from the ulnar artery, which is traumatic in origin by history. A localized dilatation of the artery is noted and laminated fibrin and blood clot partially fills the cystic space formed. A moderate inflammatory infiltrate of lymphocytic and plasma cell type is further encountered within the muscular wall and the adventitial coat of the artery. There are no further findings of note.

Diagnosis was aneurysm, traumatic, segment of ulnar artery.

The patient's wound healed (figs. 3 and 4). No evidence of any recurrence has been detected and the patient is now working.

SUMMARY

Aneurysm of the ulnar artery is a rare tumor of the hand. Dr. Mason did not mention such a case in reviewing more than 700 cases of tumors of the hand. The history of a mass appearing after an injury with a murmur present over the mass and successful resection of the aneurysm is reported.

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CARDIOVASCULAR DISEASES

(Continued from page 926)

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F. R. CROUCH, M.D., *Farmington, Mo.*

Erythroblastosis Fetalis Due to Sensitization to Kell Factor

Report of a Case

A case of erythroblastosis fetalis was diagnosed at delivery of a typically hydropic infant with a positive Coombs' test. Since the mother on repeated previous tests had been classed as Rh positive, no special studies had been made during her pregnancy. She was found after delivery to have antibodies against the Kell factor which was present in both the husband and fetus. A screening method for detecting and identifying multiple antibodies, useful in all types of obstetric practice, is suggested.

IN AN ARTICLE appearing in the *Journal of the American Medical Association* on March 1, 1941, Levine, Katzin and Burnham[1] made this concluding statement: "The question of the specificity of the agglutinins involved will be discussed in further publications, but there is sufficient evidence to indicate that most of these serums contain an agglutinin which parallels the anti-Rh agglutinin of Landsteiner and Wiener. Rh is an antigen present in the red blood cells of Macacus rhesus monkeys and in about 85 per cent of human beings." This prophetic statement referring to the possible etiology of erythroblastosis fetalis was the signal for innumerable studies of blood factors and their relationships to previously unexplained transfusion reactions as well as to "hemolytic disease of the newborn infant."

Routine determination of ABO-system type and Rh factor has been standard procedure in most obstetrical practices for many years. However, the constant search for new factors in the blood to explain the still too numerous problems in this field continues to present challenges and responsibilities to the clinician and particularly to the obstetrician who practices in a small community hospital with no house staff and limited resources for consultation and specialized services. The following case report illustrates the first instance of sensitization to the Kell factor encountered in my experience.

CASE REPORT

A 27 year old para 3, abortus 2, gravida 6, was admitted to the Bonne Terre Hospital on January 10, 1963. Although her last regular menstrual period was May 5, 1962, her fundus uteri was enlarged to a McDonald measurement of 36 cm. on January 3 and January 10, and flat plate of abdomen taken as early as December 19, 1962, had revealed "single fetal skeleton of approximately 8 months' gestation." In addition, on the x-ray it was noted that while there were no identifiable abnormalities of the fetal skeleton, the uterine shadow appeared somewhat large in relation to the size of the fetus, suggesting the possibility of hydramnios. The likelihood of a fetal anomaly (previous infant had hydrocephalus) was suggested by the presence of hydramnios and, undoubtedly, the physical discomforts obviously caused were made more acute by the apprehension of both patient and physician concerning the welfare of the fetus. It was decided that delivery should be attempted.

Aside from the point of this report, the decision to deliver from below in spite of previous section was based on these considerations:

1. The strong possibility of another abnormal product of conception.
2. A history of two previous normal full-term deliveries with babies weighing 8 lbs. 11 oz. and 7 lbs. 10 oz. respectively.
3. Direct knowledge of the well-executed previous low-cervical type Cesarean section personally observed by this writer, done on an elective basis and under optimal conditions.
4. Blood immediately available and in the delivery suite during labor and delivery.

The patient solved the timing problem by being admitted at 9:30 p.m., January 10, 1963, with the cervix thin and dilated 3 cm. Amniotomy was done. The amniotic fluid obtained was yellow in color and enormous in amount. Good contractions and progress followed. Paracervical and pudendal blocks were done at 12:30 a.m. and repeated at 1:45 a.m. as dilatation proceeded rapidly to complete. When the vertex remained for one half hour at station plus 3 in spite of excellent contractions and patient cooperation, Simpson forceps were applied and the vertex was delivered easily. Increasingly difficult to deliver were the shoulders, then the chest, and finally the fetal trunk, this last requiring strong traction and fundal pressure. Delivery was at 2:30 a.m. and a large and thick placenta was expressed intact eight minutes later.

The female infant weighed 7 lbs. 11 oz., was 18 inches long and did not develop a spontaneous cry or more than two or three respirations. The face and extremities were generally edematous, the chest moderately so; but the abdomen was enormously distended. Green fluid was aspirated from the abdomen. After a few gasps in the oxygen-filled incubator, the infant failed to revive. A Coombs' test on cord blood was positive. Autopsy revealed "Erythroblastosis fetalis with much generalized edema and ascites." Detailed laboratory studies of the parents' and fetus' blood were done at Clinical Laboratories in St. Louis, Missouri. The following results were reported on January 15, 1963:

Husband's blood: Rh_0 (D) positive; rh′ (C) positive; rh″ (E) negative; hr′ (c) negative; Kell positive (done after delivery); Blood group O.

Mother's blood: Rh_0 (D) positive; rh′ (C) negative; rh″ (E) positive; hr′ (c) positive; Blood group B. Antibody present identified as anti-Kell, with titers in saline—negative, in albumin—negative, and indirect Coombs'—positive 1 to 128.

Baby's blood: Rh_0 (D) positive; rh′ (C) positive; rh″ (E) positive; hr′ (c) positive; Kell positive; Blood group O.

Discussion

A review of records of previous hospital admissions of the mother revealed that she had been consistently type B-positive in Alton, Illinois, and on two admissions to this hospital. No tests for antibodies were done during this or previous pregnancies because there was no suspicion of a problem of this nature. Indeed, we were preoccupied with the likelihood of another congenital anomaly.

Careful vigilance for the development of maternal antibodies against possible blood factors contributed to the fetus by the male has become increasingly important as new factors have been discovered over the years. Lacking these factors, the maternal host develops antibodies against them by exposure to the fetal blood elements, and these antibodies are transmitted back across the placenta to enter the fetal blood stream and produce the characteristic changes of erythroblastosis fetalis.

Several instances of such immunization to the blood antigen Kell have been reported, but they are quite rare.[2, 3, 4] Leventhal and Wolf stated "If possible cases of OAB incompatibility are excluded, 90 per cent of cases of erythroblastosis fetalis are in classic patterns of Rh negative mother sensitized to Rh factor and pregnant with Rh positive fetus. Few cases of hydrops fetalis from Kell sensitization alone have been previously recorded. . . . Thus, sensitization to the Kell factor, though not common, may have severe effects."

Extensive studies of bloods of husband and wife are not feasible routinely. Useful short cuts to the detection of antibodies in maternal blood have been devised.[5] Technics have been simplified and services arranged so that the presence of antibodies can be detected, and their exact nature identified with a minimum of trouble and expense to the patient. (For example: "Selectogen" and "Identogen" technics of Ortho Research Laboratory, "Hemantigen" of Knickerbocker Biologics.) It is therefore advocated that these screening technics be instituted as routine procedures rather than depending on numerous painstaking studies of both paternal and maternal bloods as well as the gathering of historical data which might not be accurate as to previous transfusions, whole blood injections, and other forms of exposure to potential antibody. Determination of the presence, nature and titer of antibodies in early and late pregnancy, plus the usual immediate performances of direct Coombs' test and fetal type and Rh at delivery, should provide a maximum of warning or reassurance as to the occurrence of this potentially disastrous event.

Summary

1. A case of erythroblastosis fetalis due to sensitization to the Kell factor is presented.

2. The rare yet catastrophic nature of this event is emphasized.

3. A method of early diagnosis of the development of this problem is suggested. It is thought that the measures suggested to avoid future similar occurrences will be valuable to others who sooner or later will meet the Kell factor, hopefully with the patient and family well prepared for the potentially dire consequences, and perhaps even by then, with a course of action capable of attaining a happier result than in the case here reported.

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MICHAEL BERNREITER, M.D., *Kansas City*

Cardiac Resuscitation

Five cases with sudden cardiac arrest and successful resuscitation occurring at St. Mary's Hospital are reported. The importance of a well trained resuscitation team, the availability of the necessary machinery for electrical defibrillation and pacemakers and cardiac drugs is described.

Dr. Michael Bernreiter is the Director of the Department of Electrocardiography at St. Mary's Hospital and a member of the resuscitation team.

When the call "Dr. Blue" comes over the communication system at St. Mary's Hospital, all members of the medical and nursing staffs present at that time know that a patient's heart has suddenly stopped. Within seconds external cardiac message, establishment of open airway, and if necessary, mouth to mouth breathing will be started. The resuscitation team will arrive with an EKG machine, external electrical pacemaker, electrical defibrillator and a complete supply of drugs proven essential in cardiac resuscitation.

It is important that open airway and external cardiac massage is begun within four minutes after cardiac arrest to prevent severe cerebral damage.[1] The next important step is to determine if the patient expired as the result of cardiac standstill, or ventricular fibrillation, and such diagnosis can only be established by an electrocardiographic tracing. If ventricular fibrillation is present, an external countershock through the closed chest should be applied.[2] If defibrillation is difficult, inject epinephrine 3 cc. of 1:10,000 solution into the left ventricle, followed by vigorous external cardiac massage to distribute this drug into the circulation. This will strengthen the voltage of the fibrillation waves which in turn makes defibrillation easier (fig. 1). Weak cardiac contractions may also be strengthened by intravenous injection of calcium chloride, 0.5 to 1 gram. If resuscitation efforts are prolonged up to 30 or 45 minutes, acidosis is a common complication, and this condition should be treated with sodium bicarbonate intravenously. For persistent myocardial irritability quinidine gluconate or pronestyl is given by intravenous or intracardiac injection. To diminish brain edema in the post-resuscitation period 40 grams of urea in 5 per cent dextrose has been given intravenously twice daily with satisfactory results.

If ventricular standstill is present, and particularly if there is a history of Adams-Stokes syndrome, electrical stimulation of the heart with the external pacemaker should be tried.[3] In this situation it is quite important that the heart be well oxygenated by artifical ventilation and by external cardiac massage. After the patient improves permanent implantation is the preferred treatment, if complete AV block with syncope persists.[4]

Useful information has been gained since a resuscitation team in the hospital was established. Training, practice and drill of personnel is most important. The nurse is frequently the first person to find the patient who is in cardiac arrest. All nurses, as well as the house staff and the staff members receive careful instructions to rapidly recognize cardiac arrest and institute prompt and proper management of the existing emergency. The anesthetist is certainly one of the most important members of the resuscitation team. The patient's pulse and pupils must be checked frequently, and to prevent serious cerebral anoxia, external cardiac massage should never be discontinued for more than a few seconds.

Resuscitation efforts should be reserved for patients who die unexpectedly of cardiac arrest, and should not be used where death is the result of incurable disease.

If, in spite of all efforts, the pupils remain

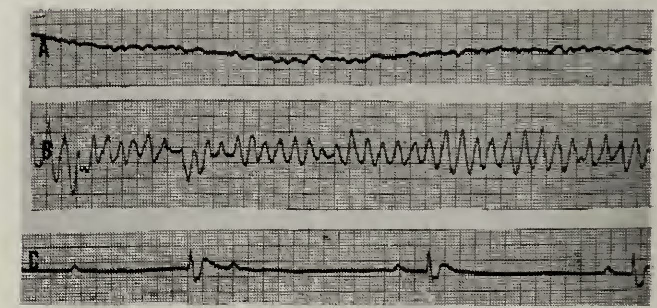

Fig. 1. Case 1. Extremely low ventricular fibrillation waves (A). Defibrillation was not successful at that time. To increase the voltage the patient was given epinephrine in the left ventricle (B). Ventricular fibrillation was terminated with electrical shock (C).

dilated and fixed, voluntary respiratory efforts cease, the EKG complexes steadily deteriorate, and the pulse disappears even during cardiac massage, the situation is usually hopeless.

The cases reported here were all clinically dead, all were resuscitated, all left the hospital and at the time of this report live a normal life. Their survival must be attributed to a well trained, immediately available resuscitation team, to artificial oxygenation, external cardiac massage, defibrillation, electrical pacemaking and proper drug application.

CASE REPORTS

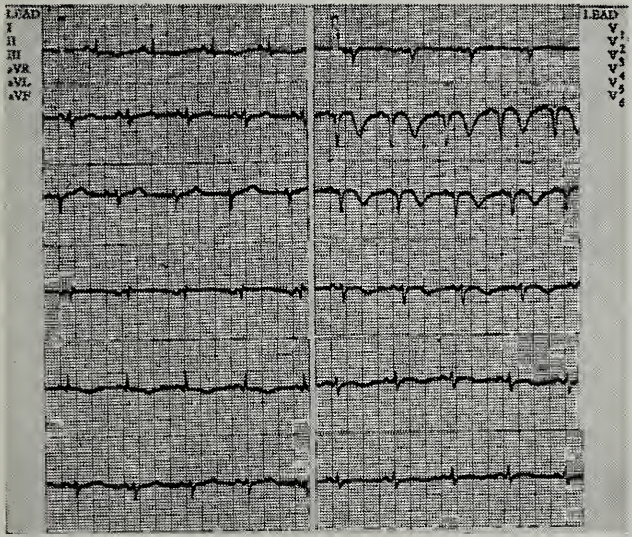

Fig. 2. Same as Case 1 on day of dismissal from hospital. EKG showed a stable pattern of anteroseptal myocardial infarction.

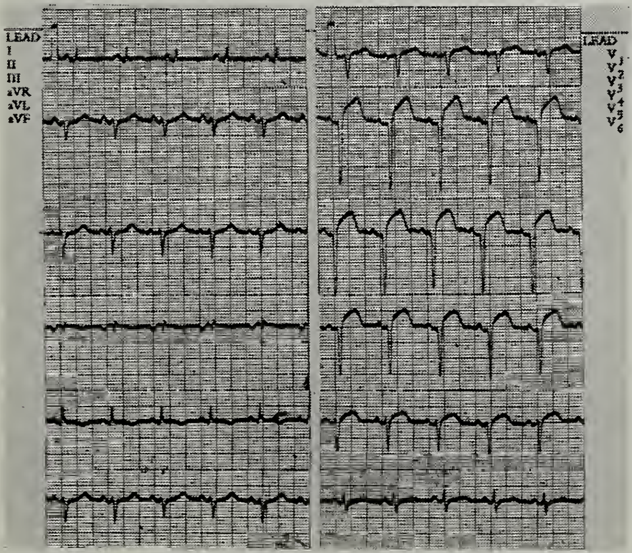

Fig. 3. Case 2. Acute anterior myocardial infarction.

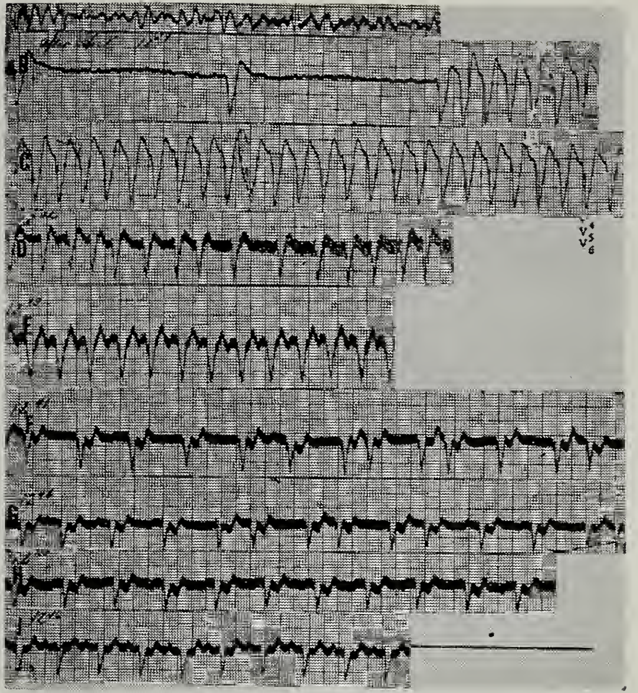

Fig. 4. Case 2. Ventricular fibrillation (A). Ventricular tachycardia (B and C). Nodal tachycardia (E, F, G, H). Sinus tachycardia (I). Electrical defibrillation started before B.

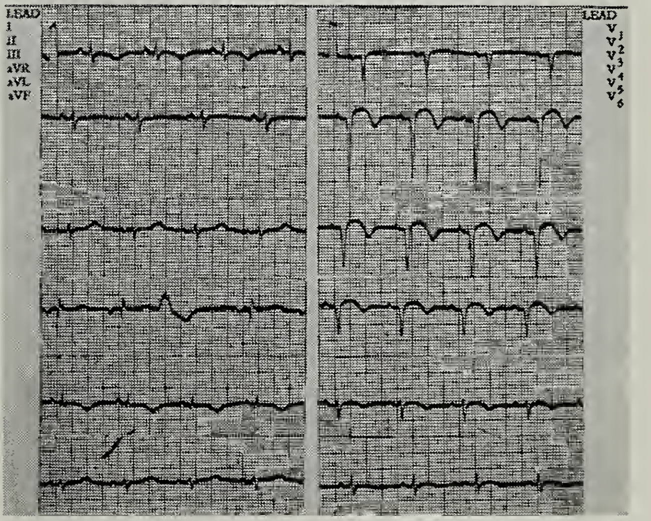

Fig. 5. Case 2. Stable pattern of anterior myocardial infarction on the date of dismissal. Aneurysm formation (?). The third beat is a ventricular premature contraction.

Case 1. This 66 year old white male developed severe chest pain and was brought to the hospital by ambulance. While in the emergency room he suddenly went into coma, his pupils were dilated, no heart tones could be heard and there was no blood pressure. External cardiac massage was started. A free airway was established and "Dr. Blue" was called. An electrocardiogram at that time showed extremely low fibrillation waves (fig. 1 A). He received several external countershocks across the chest, but ventricular fibrillation persisted. To strengthen his fibrillation waves he was given epi-

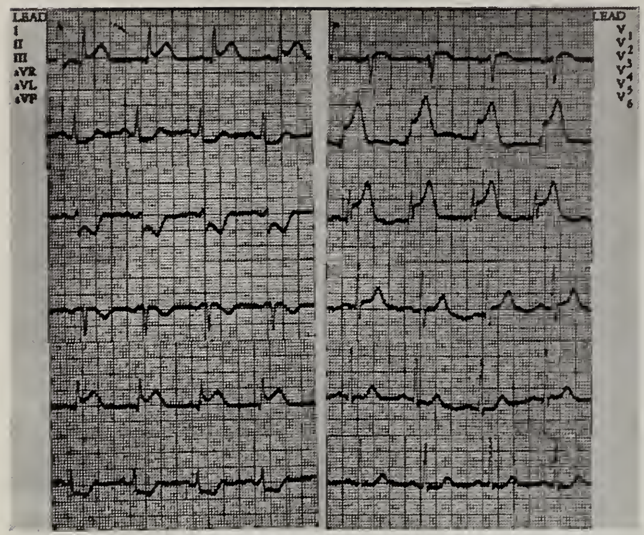

Fig. 6. Case 3. The electrocardiogram after patient entered the hospital showed incipient anterior myocardial infarction.

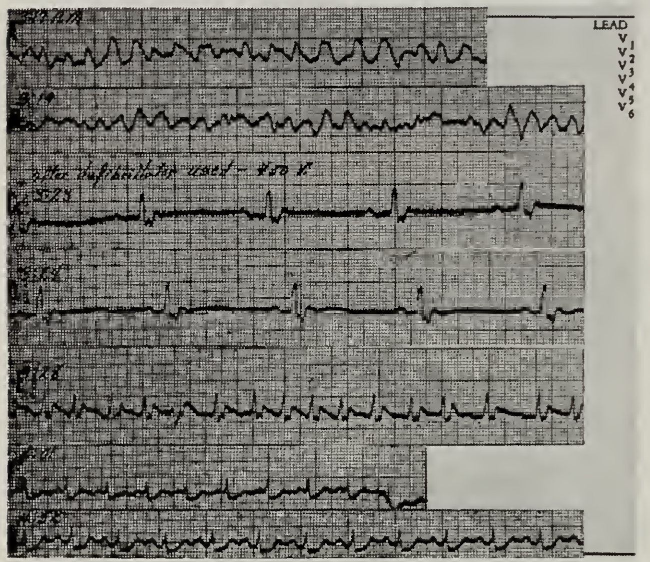

Fig. 7. Case 3. Sudden cardiac arrest occurred on the sixth hospital day. Electrocardiogram (A and B) shows ventricular fibrillation. Sinus mechanism after defibrillation (see D, E, F and G).

nephrine into the left ventricular cavity (3 cc. of 1:10,000 solution). This markedly increased the fibrillation waves (fig. 1 B). Countershock was then applied which terminated the ventricular fibrillation (fig. 1 C). External cardiac massage was continued and a sinus mechanism was established within 10 minutes. This patient left the hospital in good condition four weeks later. There were no signs of cerebral damage, and at this time this man apparently has no difficulties pertaining to his cardiac system. The electrocardiogram on the day of dismissal is shown in figure 2.

Case 2. This 62 year old patient entered St. Mary's Hospital on June 25, 1963 with a diagnosis of an acute anteroseptal myocardial infarction (fig. 3). About two hours after admittance the patient went into severe shock and appeared clinically dead. External cardiac massage and open airway were started within two minutes. "Dr. Blue" was called and an electrocardiogram at that time showed ventricular fibrillation (fig. 4). Electrical countershock stopped the fibrillation and a sinus mechanism was established. The patient made a good recovery and left the hospital four weeks later. An electrocardio-

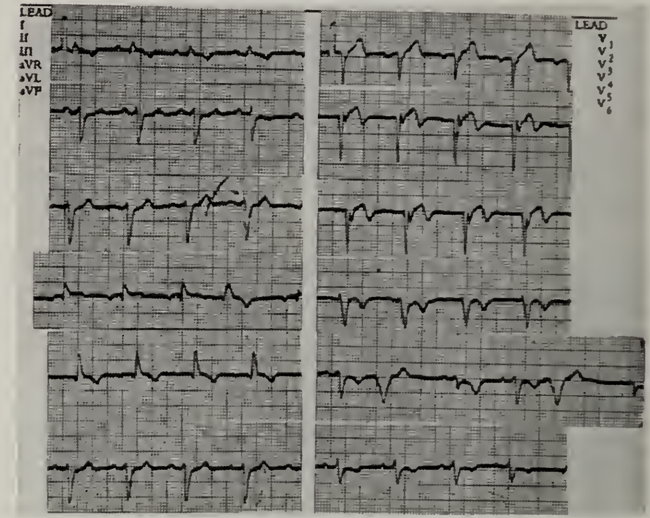

Fig. 8. Case 3. Electrocardiogram taken on the day before dismissal. Remnants of a healed anteroseptal myocardial infarction. Occasional ventricular premature contraction.

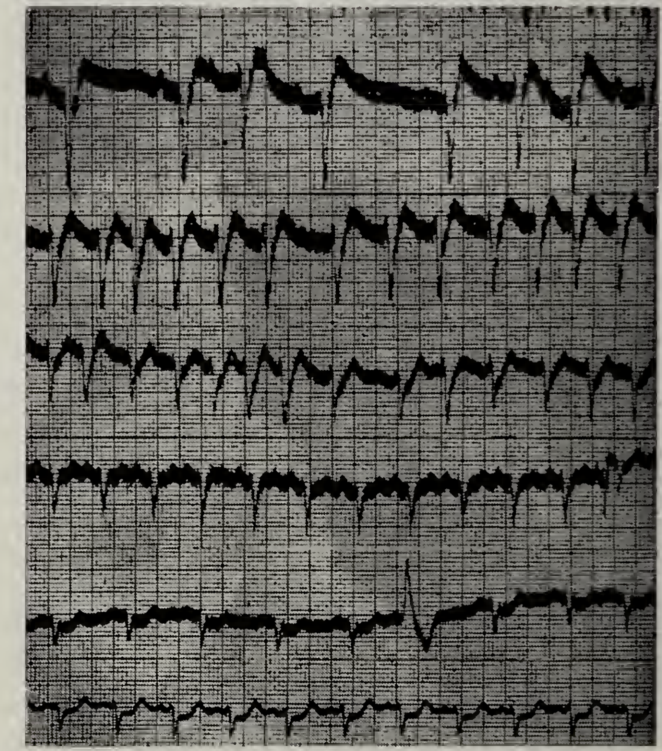

Fig. 9. Case 4. Tracing taken after cardiac arrest. Ventricular fibrillation changing to sinus tachycardia after electrical defibrillation.

gram on the day of dismissal is shown in figure 5.

Case 3. A 62 year old male entered the hospital April 26, 1963 with the diagnosis of acute anterior myocardial infarction (fig. 6). On May 2, 1963, while being fed by an orderly he suddenly collapsed and apparently expired. The floor nurse started external cardiac massage, "Dr. Blue" was called and an electrocardiogram showed ventricular fibrillation. Electrical defibrillation terminated the ventricular fibrillation and a sinus tachychardia was established. The sequence of these events is shown in figure 7. After resuscitation this patient developed congestive heart failure which responded well to digitalization. He was dismissed from the hospital on June 2, 1963, without any signs of cerebral damage and was apparently in good physical condition.

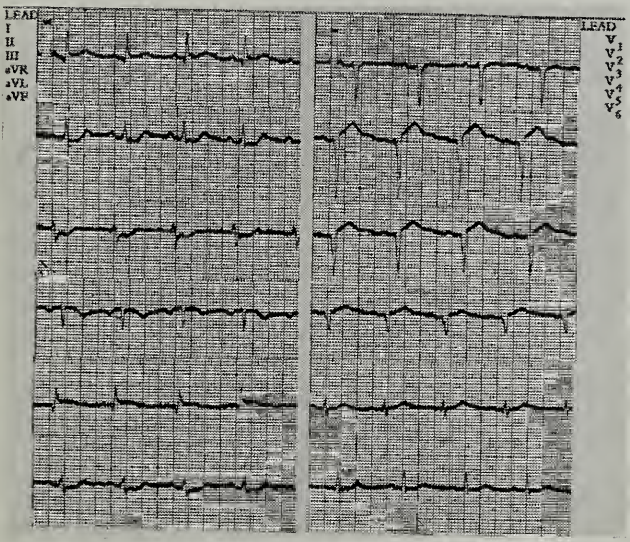

Fig. 10. Case 4. Electrocardiogram taken on the day before dismissal from the hospital. Stable pattern of anterior myocardial infarction.

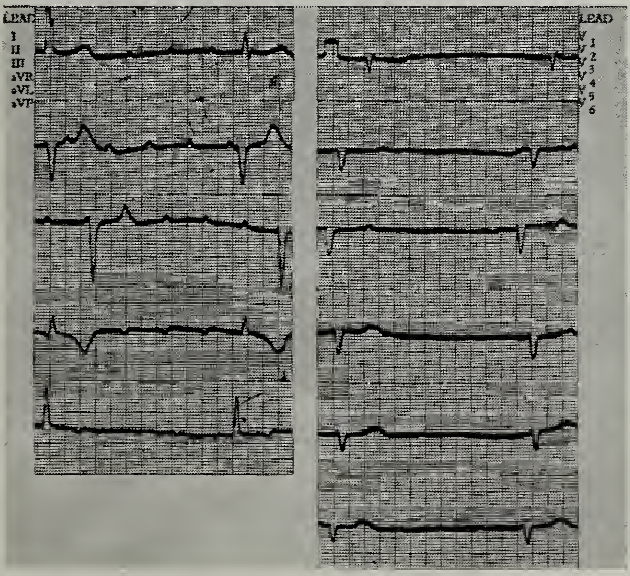

Fig. 11. Case 5. Complete AV block. Idioventricular rhythm with a rate of approximately 23 per minute.

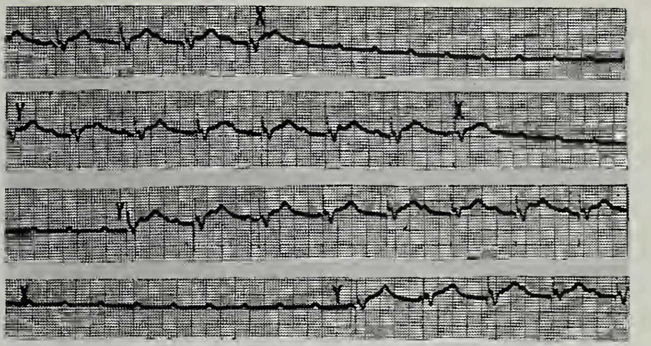

Fig. 12. Case 5. All strips taken on Lead II. The activity of the external electrical pacemaker is plainly demonstrated by the fine negative deflections preceding the QRS complexes. When the pacemaker is turned off (X) ventricular activity ceases. When it is turned on (Y) ventricular activity is again resumed.

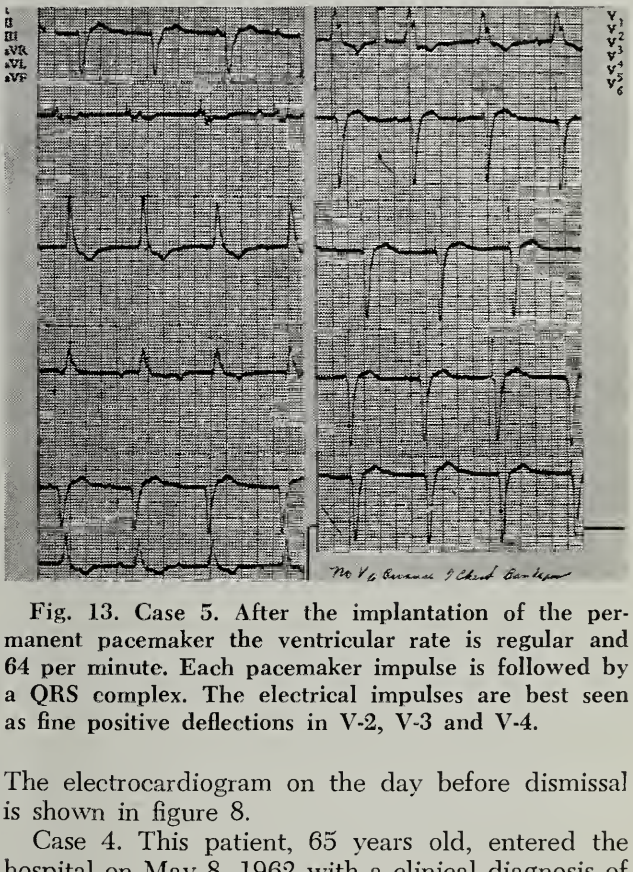

Fig. 13. Case 5. After the implantation of the permanent pacemaker the ventricular rate is regular and 64 per minute. Each pacemaker impulse is followed by a QRS complex. The electrical impulses are best seen as fine positive deflections in V-2, V-3 and V-4.

The electrocardiogram on the day before dismissal is shown in figure 8.

Case 4. This patient, 65 years old, entered the hospital on May 8, 1962 with a clinical diagnosis of acute myocardial infarction. Cardiac arrest occurred soon after admittance. Cardiac massage and mouth to mouth breathing was started immediately. "Dr. Blue" was called. An electrocardiogram showed ventricular fibrillation. A sinus mechanism was established after electrical defibrillation (fig. 9). The patient was dismissed from the hospital on June 25, 1962. The electrocardiogram taken on the day before dismissal is shown in figure 10.

Case 5. This 66 year old white female was admitted to the hospital in August 1957 with a diagnosis of Adams-Stokes syndrome. She had had many syncopes and her electrocardiogram showed a com-

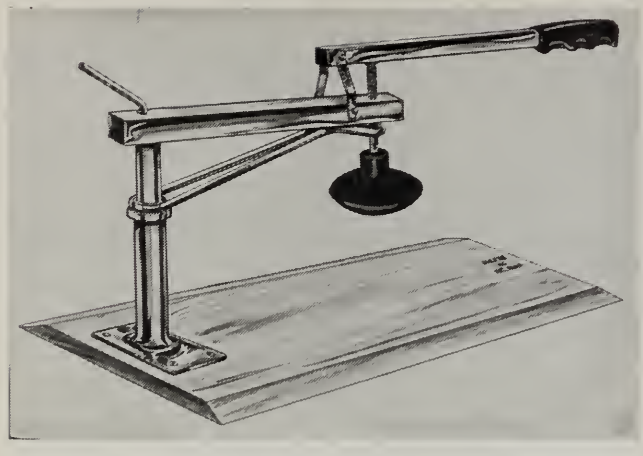

Fig. 14. Hand pump for external cardiac massage. This can be set so that the plunger will depress the sternum an inch or an inch and a half. The instrument has been found quite useful and certainly an advantage over external manual massage. This pump was constructed under the direction of Dr. James J. Lally.

plete AV block with an idioventricular rhythm of about 23 per minute (fig. 11). Sympathicomimetic drugs were successful in controlling the fainting spells, but soon became inefficient and the patient was put on the external electrical pacemaker 5 (fig. 12). After about 36 hours of artificial stimulation the pacemaking was discontinued and an electrocardiogram taken at that time showed a 3:1 AV block with a ventricular rate of approximately 50 per minute.

In July 1962 the patient again developed severe symptoms of Adams-Stokes syndrome. She was brought to the hospital and was pronounced dead on arrival. Resuscitation efforts were successful and on August 13, 1962, a permanent electrical pacemaker was installed. The patient made a good recovery. Her ventricular rate is 64 and regular since the implantation of the permanent pacemaker. This 66 year old patient has been free of syncopal attacks since the pacemaker implantation. Figure 13 shows an electrocardiogram with the ventricles driven by the artificial pacemaker.

ADDENDUM

Recently a hand pump (fig. 14) constructed by Dr. James J. Lally for external cardiac massage has been used. This has proven quite advantageous over the manual chest compression. It can be set so that an inch or an inch and a half compression is delivered against the sternum, and the operation of this pump is certainly much less tiresome than manual external massage.

SUMMARY

The successful resuscitation of five patients with complete recovery is reported. This has been made possible by a highly trained and immediately available resuscitation team in St. Mary's Hospital, and the cooperation of the attending medical and nursing staffs.

DISCUSSION

External cardiac massage, establishment of free airway and external defibrillation has been a successful method in resuscitation of patients with sudden cardiac arrest. The implantation of a permanent pacemaker in cases of complete heart block and Adams-Stokes syndrome has been a life saving procedure for these individuals.

The author wishes to express his thanks to Drs. Ernest G. Neighbor, Cecil G. Leitch and William W. Gist for their kind cooperation and referral of these cases.

The permanent pacemaker described in Case 5 was implanted by Dr. John H. Mayer.

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PYLOROSPASM • BILIARY DYSKINESIA • PANCREATITIS • URETERAL AND URINARY BLADDER SPASM • GASTRITIS

PYLOROSPASM • BILIARY DYSKINESIA • PANCREATITIS • URETERAL AND URINARY BLADDER SPASM • GASTRITIS

PEPTIC ULCER • FUNCTIONAL HYPERMOTILITY • IRRITABLE COLON

HAROLD L. KENNEDY, M.D., *Grand Rapids, Mich.*

Juvenile Thyrotoxicosis

The reported incidence of thyrotoxicosis in children is low. Approximately 1 per cent of all cases of thyrotoxicosis occur under the age of 15 years, and of these 60 to 80 per cent occur between the ages of 10 to 15 years.[1,2] The disease has been observed in infants as young as 1 year of age.[2] The overall sex incidence favors girls about six or eight to one. The caucasian and negroid racial incidence appears equal. There is a high incidence of exophthalmic goiter among some families, but the genetic role of the disease has not been established.

The etiology and pathogenesis of thyrotoxicosis are presently unknown. Since the recognition of the thyroid-stimulating activity of pituitary extracts, the triad of hypermetabolism, diffuse goiter and exophthalmos has generally been ascribed to an excessive secretion of pituitary thyrotropin (TSH). However, attempts to correlate circulating TSH levels in thyrotoxic patients fail to substantiate this hypothesis; furthermore, persistent thyroid function or thyrotoxicosis has been observed after hypophysectomy.[3] Because of the lack of clinical and experimental correlation of circulating TSH levels and exophthalmos, investigators have postulated and demonstrated the existence of a causative factor distinct from TSH "exophthalmos-producing substance (EPS)."[4] Stress, e.q., severe or sustained emotional conflict or trauma, has long been recognized as having a relationship to the etiology of thyrotoxicosis, although the mechanism involved has not been elucidated.[5] It has recently been shown that thyrotoxic patients have a serum thyroid-stimulating factor, presently termed "long acting thyroid stimulator (LATS)," which differs qualitatively from TSH.[6] LATS has been detected in the serum of most hyperthyroid patients, in patients with exophthalmos without hyperthyroidism, and in only a few normal subjects. In addition to having a prolonged effect on the thyroid gland of assay animals, LATS further differs from TSH by: resistance to enzymatic hydrolysis; insensitivity or reduced sensitivity to TSH anti-serum; and a prolonged half-life.[7] Although LATS appears to be a distinct entity and not TSH abnormally bound or metabolically changed, this remains to be proven. Parallel assays fail to show any strict correlation between EPS and LATS.[8] The inability to extract LATS from the pituitary glands of subjects whose serum contain it, and the fact that LATS may be detected in the serum of thyrotoxic patients several months after hypophysectomy lend support to the hypothesis that LATS has an extra-pituitary origin. Despite the bulk of uncertainty existing on the significance, origin and nature of LATS, its discovery has opened a new approach to investigation of the etiology and pathogenesis of thyrotoxicosis.

Although juvenile thyrotoxicosis has a low incidence, as evidenced by its infrequent appearance at the University Hospital, it does present diagnostic and therapeutic aspects which differ significantly from adult thyrotoxicosis and thus warrant description. It is the purpose of this paper to describe juvenile thyrotoxicosis, to present contemporary views on the management and treatment of this disease and to review a total of four documentated cases of juvenile thyrotoxicosis which have been treated at the University of the Missouri Hospital during its eight year history.

Dr. Kennedy was a senior in medicine at the University of Missouri School of Medicine at the time this presentation was written.

More than 95 per cent of children with thyrotoxicosis manifest a bilateral diffusely enlarged, soft and vascular thyroid gland. The essential pathologic picture is that of parenchymatous hypertrophy and hyperplasia characterized by increased height of the epithelium and redundancy of the follicular wall, giving the picture of papillary infoldings and cytologic evidence of increased activity. Hypertrophy and hyperplasia characteristically involves the entire parenchyma of the thyroid gland in children. Toxic adenoma in childhood has not been reported; however, both non-toxic adenoma and carcinoma of the thyroid, unaccompanied by thyrotoxicosis, may occur in children.[9]

The clinical symptoms of juvenile thyrotoxicosis are usually dominated by complaints of emotional instability and nervousness. An initial trigger mechanism may be found in 50 per cent of cases which consists of stress in the form of emotional problems, mental trauma, an acute febrile illness or physical trauma prior to the onset of the disease. Relapses and exacerbations may also be precipitated by stress. Increased nervousness, irritability, restlessness and emotional instability dominate the clinical picture in children. Schoolwork may suffer, and the restlessness with hyperactivity often leads the irritable labile child to conflict and tears. Complaints of an excessive appetite accompanied by a loss of weight or failure to gain weight are common. Hyperhidrosis, intolerance to heat, inability to sleep soundly and palpitation are common complains which may be reported. These symptoms, however, frequently go unheeded until the development of exophthalmos or diffuse goiter prompts the patient and parents to seek medical evaluation.

Physical findings in children are usually related to eye signs, local changes in the thyroid gland, cardiovascular signs and changes in weight and height. Exophthalmos is noted in the majority of children, although ocular signs of infrequent blinking, lid lag, failure of convergence, and failure to wrinkle the brow on upward gaze are variable in their occurrence. The thyroid gland is diffusely enlarged, visible and palpably soft. It moves with deglutition, and audible bruits are usually ascultated over the gland. Signs of tracheal or substernal obstruction have been noted with enlargement of some glands, but are rare. Cardiovascular findings include an increased sleeping pulse rate which may progress to striking sinus tachycardia, and frequent apical systolic murmurs. Cardiac enlargement with displacement of the PMI and cardiac border laterally is not infrequent, and overt, high-output heart failure may occur. Frequently children with thyrotoxicosis are tall for their age group. This factor coupled with their usual inability to gain weight results in a lengthy lanky habitus. Osseous development is usually advanced for their age, although sexual maturation is delayed in most cases. Dermatologic features of increased melanin pigmentation, velvety texture and fine silky hair are often equivocal in the child. Precocious eruption of the teeth, hyperactive deep tendon reflexes, and a fine tremor of the tongue and the out-stretched hands are other physical findings which may lend support to the diagnosis.

Laboratory studies reveal elevated protein bound iodine (PBI), butanol extractable iodine (BEI), and I^{131} uptake levels. The serum cholesterol is usually low or below normal values. It is to be noted, however, that the ingestion of thyroid substances or iodine-containing compounds may interfere with the correct values of these tests. The administration of iodine in any form (Lugol's solution, salt substitutes, expectorants, radiopaque dyes or cough syrups) will invalidate the PBI and I^{131} uptake studies; the BEI, however, is usually valid with excesses of iodine but is falsely elevated by organic iodine compounds. If iodine containing substances have been administered, the red blood cell or resin uptake of radioactively tagged triiodothyronine is valid since this test depends upon the quantitative availability and the degree of saturation of binding sites of plasma protein carriers for thyroid hormones and is unaffected by any non-thyroxine iodine substance in the serum.[10, 11]

The basal metabolic rate (BMR) which measures overall oxygen consumption of the body and not specifically thyroid function is difficult to evaluate in children who may present many extra-thyroidal disturbances of hypermetabolism and is seldom used today in evaluating juvenile thyrotoxicosis. A suppression test for hyperthyroidism is utilized by some clinicians and may be helpful in delineating patients whose clinical status is equivocal, but laboratory values reveal "high normal" findings. The daily administration of from 100 to 150 μg of L-triiodothyronine by mouth for eight days causes a fall in the radioactive 24 hour I^{131} uptake level to below 20 per cent in patients with normal thyroid function. Conversely, patients with thyrotoxicosis or exophthalmic euthyroidism fail to suppress below a value of 20 per cent.[12] Radiographs of the thorax will reveal any dilatation of the cardiac shadow that may result from the high-output failure frequently associated with thyrotoxicosis, and on rare occasion, displacement of the esophagus or trachea as noted on a barium swallow radiograph will be due to substernal enlargement of the thyroid gland.

Management and Treatment

The specific treatment of thyrotoxicosis still awaits discovery of the basic cause of the disease and of a satisfactory cure for it, but until that time clinicians have sought to control the disorder by roentgen, medical and surgical therapy.

Roentgen therapy is not advocated in children since it is known that even mild doses of irradiation given for thymic enlargement may occasionally over a period of years be followed by carcinoma of the thyroid gland.[13, 14] Thus, radioactive iodine therapy is contraindicated in the treatment of juvenile thyrotoxicosis.

Prior to the discovery of the antithyroid drugs, medical management was primarily directed toward alleviating the element of "stress" which consistently displays a direct relationship in the initiation and relapse of thyrotoxicosis, especially evident of the juvenile type. The child's emotional conflict and psychic trauma resulting from familial maladjustment, socio-environmental factors, and personality disturbances were treated by psychotherapy, improvement and/or manipulation of the home environment, and sedation with fair results.[15] Since the introduction of the thiourea drugs in 1943, the antithyroid drugs (thioureas, perchlorates, and imidazoles) have been utilized and investigated extensively by various clinicians. Popular opinion currently designates propylthiouracil as the drug of choice because of its low incidence of toxicity and greater experience in most clinics. A dose of 100 mg. is given every eight hours daily for two to three years. Adverse reactions to propylthiouracial include leukopenia, nausea, urticaria, dermatitis, hepatomegaly, splenomegaly and agranulocytopenia. Leukopenia is the usual undesirable side effect encountered; and after drug administration is initiated, leukocyte counts are advised at weekly intervals the first month, monthly intervals the next four months, and at three month intervals thereafter. The dosage is reduced if leukopenia develops, and another antithyroid drug is substituted if the leukopenia persists. A clinical response to therapy is frequently noted within four to eight weeks by the insidious remission of symptoms and signs. All patients receiving medical therapy are treated for at least two years, and usually exhibit a seemingly permanent remission within three years. Currently there is no way of knowing whether remission has occurred without stopping therapy, but the L-triiodothyronine suppression test is currently advocated as a good prognostic index in this regard.[12, 16] Those patients who display a normal pituitary-thyroid axis by a suppressible radioactive 24 hour I^{131} uptake level following antithyroid drug therapy, in most instances remain euthyroid after discontinuance of medical therapy. This type of medical regimen is effective in a large proportion of patients, and successful seemingly permanent remissions are obtained in from 50 to 75 per cent of those treated.[16-19] Although modern medical management centers about drug therapy, the clinician should avail himself of every therapeutic tool, and direct efforts toward alleviation of the "stress" element of every patient as well to affect the most efficacious medical regimen. Medical therapy has its advantages in that the patient is spared the stress of an operative procedure, and the 40 to 50 per cent incidence of surgical complication which frequently follows it. However, the medically treated patient is then obliged to follow a definite daily regimen of medication every eight hours for a period usually of two to three years, and to be readily accessible to his physician for regulation of dosage and recognition of drug toxicity, which must be suspected whenever the child develops an acute infection. Moreover, the medically treated patient faces the possibility that he may inevitably become a surgical candidate if he fails to respond to medical therapy or chronically relapses.

Surgical therapy of juvenile thyrotoxicosis had its origin during the early part of the century. Since its inception, improved surgical technics and adequate preoperative and postoperative treatment have progressed to render surgery an effective means of therapy. Those patients treated surgically are placed on a regimen of propylthiouracil 100 mg. every eight hours for approximately three months prior to subtotal thyroidectomy.[17, 18, 20] Toward the close of this period, after a euthyroid state has been achieved and the patient has regained a satisfactory nutritional and emotional status, five drops (300 mg.) of a saturated solution of potassium iodide is added to the daily regimen for 10 to 14 days. With this regimen, a well involuted, relatively avascular nontoxic thyroid gland results which can be excised without the danger of thyroid storm and with minimal risk of excessive bleeding during surgery. Subtotal thyroidectomy is then performed with an objective of leaving approximately 1 gram of thyroid tissue. Surgical complication occurs in 40 to 50 per cent of cases, most commonly being permanent hypothyroidism.[17, 18, 20] Other common complications include hypoparathyroidism, recurrent laryngeal nerve damage, postoperative hemorrhage, and cosmetic trauma. Surgical therapy has its advantages in that for approximately the same expense as a two to three year course of medical therapy, an ablative procedure is performed which rarely relapses when done by experienced surgical groups. The patient and parents avoid the chronic stress imposed by a confining medical regimen and the continuous need to be alert for drug toxicity. However, the frequent occurrence of permanent hypothyroidism postoperatively, necessitating a daily dose of thyroid hormone for life; the definite operative mortality risk; and the relative assessibility of a competent medical regimen in most areas are disadvantages to selection of surgery as the therapy of choice.

It is the policy of the University Hospital that each thyrotoxic child who has a reliable parent is treated with a medical regimen as described; and surgical therapy is reserved for those patients who relapse after adequate medical therapy, are sensitive to antithyroid drugs, or fail to adhere to the medical regimen because of unreliable parental, environmental or economic factors.

Thus the practitioner and pediatrician are confronted with two major approaches to the treatment of juvenile thyrotoxicosis—medical and surgical. Each has its advantages and disadvantages, and selection of a therapeutic program must be predicated not only upon the clinical picture, but also upon the patient-parent reliability, as well as environmental and economic factors.

CASE REPORTS

Case 1. A 12 year old caucasian female appeared at the University Hospital Pediatric OPD for evaluation after being followed by the family pediatrician for diffuse thyroid enlargement of one year duration. Six months prior to the visit, the patient developed nervousness, hyperkinesis, increased appetite with loss of weight, and increase in height. A serum PBI of 25 μg per cent (normal 4 to 8 μg per cent) and a RBC T-3 uptake of 13.9 per cent (normal 11 to 17 per cent) were present. Because of a possible thyroiditis, she was treated with one gram daily of desiccated thyroid without a remission of symptoms. The patient was then referred to the University Hospital.

The family history was significant in that the maternal and paternal mothers, a maternal aunt, and two maternal cousins received thyroidectomies for thyroid disease. Examination revealed a nervous hyperkinetic child who had trouble sitting still. A pulse rate of 140 per minute, blood pressure of 156/70, and weight of 119 pounds was present. There was mild exophthalmos accompanied by a slight lid lag. The thyroid gland was diffusely enlarged, soft and nontender with an audible bruit over both lobes. The PMI was displaced to the anterior axillary line, the heart sounds were loud and an apical thrust noted. Auscultation revealed a Grade II/VI apical systolic murmur which radiated along the left sternal border. A fine tremor of the extended hands and tongue were noted, and the deep tendon reflexes were hyperactive with the ankle displaying clonus. The serum PBI was 16 μg per cent, RBC T-3 uptake 27 per cent, and a serum cholesterol 81 mg. per cent.

One week following the patient's initial visit, medical therapy on an out-patient basis of propylthiouracil 100 mg. every eight hours was initiated with discontinuance of the desiccated thyroid medication. The patient returned weekly during the first month of therapy for leukocyte counts without evidence of adverse drug reaction. Evaluation after four weeks of therapy evidenced a remission of hyperactivity and nervousness. The mother stated that the child had a more stable personality and slept more soundly. A pulse rate of 104 per minute, blood pressure of 134/74, and weight of 129 pounds was present. Mild exophthalmos persisted without lid lag. The thyroid gland remained diffusely enlarged with audible bruits. The PMI was in the midclavicular line with normal heart sounds and a Grade II/VI systolic murmur without radiation was ausculated at the apex. All deep tendon reflexes were normal and there was no tremor of the extended hands or tongue. The serum PBI was 7.4 μg per cent. The patient was continued on propylthiouracil 100 mg. every eight hours. Six weeks after initiation of medical therapy, the total daily dose of propylthiouracil was decreased to 250 mg., and after eight weeks of therapy to 200 mg. Examination after eight weeks of propylthiouracil therapy revealed a pulse rate of 84 per minute, blood pressure of 125/70, and weight of 141 pounds. Other findings were unchanged with the exception of a slight increase in neck circumference. The serum PBI was 4.6 μg per cent. The patient is currently being followed in the Pediatric OPD.

Case 2. A 12 year old Negro female, who two weeks prior to appearing at the University Hospital Pediatric OPD developed symptoms of lethargy, nausea, anorexia, nervousness, irritability, and frequent episodes of "crying for no reason." Within the next few days, the patient experienced symptoms of hyperkinesis with easy fatigability, increased appetite, restlessness, heat intolerance and palpitation. During this time a visiting aunt noted that the patient's neck appeared slightly "swollen" and the mother exclaimed that the patient's eyes had become "poppy and red." She was brought to the University Hospital when these symptoms persisted.

The family history revealed a paternal aunt and paternal mother who had goiters. Physical examination showed a slender lanky appearing girl who was described as "figidity" by the examiner. A pulse rate of 148 per minute, blood pressure of 130/60, and weight of 59 pounds was present. Moderate exophthalmos was accompanied by slight conjunctivitis, lid lag and failure to wrinkle the brow on upward gaze. The thyroid gland was diffusely enlarged, soft and nontender with an audible bruit over the right lobe. The PMI displayed a bounding quick thrust without displacement of the cardiac border. A high pitched Grade II/VI systolic murmur was noted at the apex. The deep tendon reflexes of the lower extremities were hyperactive. The patient was admitted to the University Hospital Pediatric ward for evaluation. Laboratory studies revealed a serum PBI 13.6 μg per cent, RBC T-3 uptake 19 per cent, 24 hr. I-131 uptake 79 per cent and serum cholesterol 97 mg. per cent.

Although there was a question of parental reliability and economic feasibility initially, it was felt by the treating physician, that medical therapy was warranted and propylthiouracil 200 mg. in divided dose every eight hours was initiated. The patient was discharged after two weeks of therapy at which time there was no restlessness, hyperkinesis, nervousness or irritability. A pulse of 108 per minute, blood pressure of 120/65, and weight of 66 pounds was present. Ophthalmic examination remained unchanged with the exception of a remission of conjunctivitis following topical steroid treatment. No bruit was auscultated over the thyroid gland. An apical systolic Grade II/VI murmur remained, and all deep tendon reflexes were normal. The serum PBI was 5.8 μg per cent and serum cholesterol was 138 mg. per cent. Leukocyte counts remained normal throughout the hospital stay. The patient was discharged on propylthiouracil 200 mg. daily in three divided doses to be followed in the Pediatric OPD.

Seven weeks after initiation of therapy, the patient appeared asymptomatic. A pulse rate of 95 per minute, blood pressure of 110/75, and weight of 74 pounds was present. Exophthalmos was noted to be slight without lid lag. The thyroid gland was diffusely enlarged without bruit. No cardiac murmur was present. The serum PBI was 4.8 μg per cent. Because the leukocyte count had decreased from 8,000 to 5,800 cells per mm.^{3} during the previous two week interim, it was decided to decrease the propylthiouracil dosage to 150 mg. daily. The patient is presently being followed in the Pediatric OPD.

Case 3. A 9 year old caucasian female, six months prior to admission developed complaints of nervousness, heat intolerance, a voracious appetite with weight loss, easy fatigability, inability to sleep well and palpitation. About this same time the patient was reported to have an episode of "flu." She was seen by her family physician at that time who initiated iodine solution and phenobarbital therapy. After two months of treatment without improvement, the patient was referred to the University Hospital.

Family history was non-contributory. The pulse rate was 118 per minute, blood pressure 150/90, and weight 64 pounds. Exophthalmos was obvious, accompanied by failure to converge and inability to wrinkle the brow on upward gaze. The thyroid gland was diffusely enlarged. A sinus tachycardia was noted without murmurs. The skin was noted to be slightly moist. The serum PBI was 17.2 μg per cent and serum cholesterol was 200 mg. per cent. The patient was treated with propylthiouracil 100 mg. every eight hours. After four weeks of medication, a pulse rate of 102 per minute, blood pressure of 110/75, and weight of 74 pounds was present. Exophthalmos was noted to be less prominent without change in the size of the thyroid gland. The serum PBI was 11.6 μg per cent and serum cholesterol was 218 mg. per cent. The patient was discharged on propylthiouracil medication 100 mg. every eight hours, to be followed in the Pediatric OPD.

After six months of medical therapy, it was noted that the patient had gained 25 pounds in weight. At that time, the clinical impression was that the patient had no exophthalmos and that the thyroid gland had definitely regressed in size. The serum PBI was 4.7 μg per cent. The patient was felt to be euthyroid. The propylthiouracil dosage was decreased to 150 mg. daily and continued for the next nine months, then decreased to 50 mg. daily for 10 months, and then decreased to 25 mg. for 13 months. The patient was thought to be euthyroid during this entire 34 month period with serum PBI levels in the normal range of 4 to 8 μg. per cent.

Three years and four months after the patient's initial admittance, complaints of increased sweating, irritability, difficulty in school and frequent crying reappeared. A pulse rate of 120 per minute, blood pressure of 120/70, and weight of 117 pounds was present. Exophthalmos was not present, but a diffusely enlarged thyroid gland and a fine tremor of the hands were noted. The serum PBI was 11.7 μg per cent. The patient was readmitted to the University Hospital and the dosage of propylthiouracil increased to 100 mg. every eight hours. Upon questioning, it was disclosed that for several months preceding the patient's second admission, the medical regimen was not followed and medication was often not taken for periods as long as a week. The patient was treated with medication for three weeks with a remission of all symptoms. A pulse rate of 72 per minute, blood pressure of 105/70, and weight of 117 pounds was present. Fine tremor was absent but the thyroid gland remained diffusely enlarged. The serum PBI was 7.5 μg per cent. After much deliberation and assurance from the family that a more conscientous effort to adhere to medical regimen would be made, the patient was discharged on propylthiouracil 100 mg. every eight hours to be followed in the Pediatric OPD. After one clinic visit, the patient failed to keep her scheduled appointments and was not seen at the University Hospital for the next 20 months.

At the age of 13 years, the patient reappeared at the University Hospital with complaints of nervousness, increased irritability, weight loss, difficulty in school and unexplained episodes of crying. During the interim, propylthiouracil medication had continued according to the mother. Symptoms apparently had begun four months prior to the clinic visit following a marital separation of the patient's parents. A pulse rate of 100 per minute, blood pressure 128/80, and weight of 122 pounds was present. Slight exophthalmos and a diffusely enlarged thyroid gland were noted. A Grade II/VI systolic murmur in the aortic area was present. Deep tendon reflexes were hyperactive. The serum PBI was 8.5 μg per cent, RBC T-3 uptake 17 per cent, and serum cholesterol 114 mg. per cent. The patient was admitted to the University Hospital and felt to warrant surgical therapy. After treatment with propylthiouracil for two weeks with a return of a clinical euthyroid state, and a 13 day course of Lugol's solution, the patient was subjected to bilateral subtotal thyroidectomy. The postoperative course was uncomplicated and the patient was discharged without medication. The patient is presently being followed in the Pediatric and Surgery OPD.

Case 4. An 11 year old caucasian female, while in apparent good health, was noted to have prominent eyes by members of the family. She was taken to an eye specialist who prescribed glasses. Six months later, the patient's brother returned home from military service and noticed that the patient's neck was enlarged. Family concern at that time prompted the patient to visit the University Hospital Pediatric OPD for evaluation. There had been no change in the child's general behavior to the family's knowledge, although school authorities had complained of the child being "nervous." Review of systems disclosed that the child had grown four inches during the previous 16 months, had an increased appetite, and was believed to have slight heat intolerance.

Family history was non-contributory. A pulse rate of 110 per minute, blood pressure of 120/70, and weight of 72 pounds was present. Definite exophthalmos and a moderate diffusely enlarged thyroid gland were noted. A slight tremor of the hands was present and deep tendon reflexes were slightly hyperactive. A diagnosis of mild hyperthyroidism was made and the child was discharged on 1/2 grain of phenobarbital daily. Shortly thereafter the patient moved to Ft. Benning, Ga., with her brother. It was at that time, the brother noted that the patient had frequent episodes of crying with apparently no reason, and a tremendous appetite with a loss of weight. The patient was taken to the Ft. Benning Army Hospital where examination revealed a pulse rate of 120 per minute, blood pressure of 110/60, and weight of 67 pounds. Moderate exophthalmos and a diffusely enlarged thyroid gland were noted. Other physical findings were normal. A serum PBI was 9.6 μg per cent and a serum cholesterol was 151 mg. per cent. X-ray findings revealed healed histoplasmosis. The diagnosis of juvenile thyrotoxicosis was made and the patient admitted to the hospital. She was treated with propylthiouracil medication 100 mg. every eight hours. During her hospital stay, the sleeping pulse rate decreased to 100 per minute, and other physical findings remained unchanged. Five weeks after admission the patient was discharged on propylthiouracil 100 mg. every eight hours. At the time of discharge, the serum PBI was 6.2 μg per cent. Three weeks later on clinic follow-up, a pulse rate of 90, blood pressure of 112/70, and weight of 75 pounds was present. Physical examination was unchanged, and the serum PBI was 2.0 ug per cent. The total daily dosage of propylthiouracil was reduced to 200 mg. after twelve weeks of therapy, and then to 100 mg. after 16 weeks of therapy. Because the patient was returning to Missouri, she was discharged and referred to the University Hospital Pediatric OPD for follow-up.

The patient was seen at the Pediatric OPD one year following her initial visit. She was felt to be euthyroid at the time and propylthiouracil medication was decreased to a daily dose of 75 mg. The patient was followed monthly. Two months later a serum PBI of 2.5 ug per cent was present which prompted reduction of propylthiouracil dosage to 50 mg. daily. The patient remained on this dosage for the next 30 months with a remission of exophthalmos and thyroid enlargement after 24 months. Leukocyte counts followed at three month intervals remained normal. The patient was then instructed to discontinue all medication and has seemingly remained euthyroid for the last four years. She has been followed at six month intervals since discontinuance of medication with consistent normal physical findings and serum PBI levels. She is presently attending the University of Missouri.

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Leonard T. Furlow, M.D.

President's Message

On November 3, we Americans will again have the privilege and the opportunity to cast our votes for candidates for national, state and local offices.

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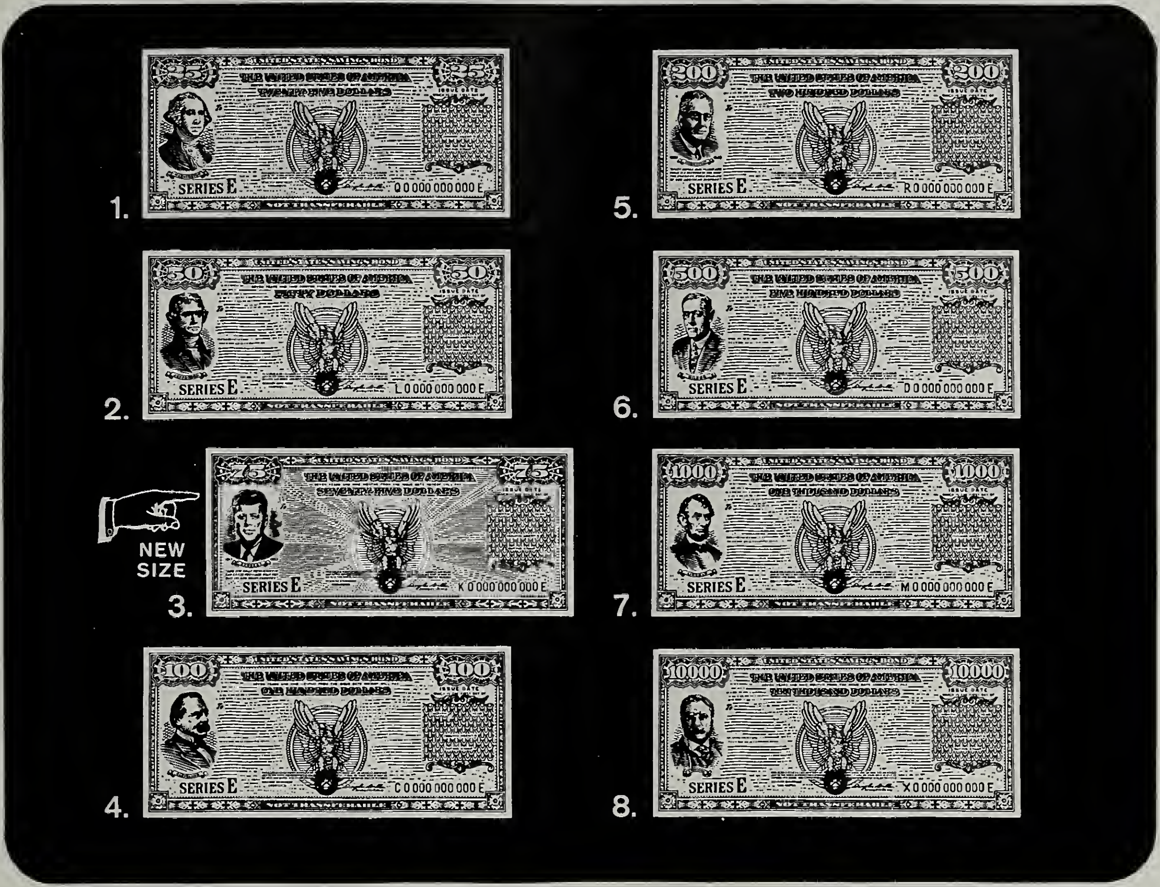
I believe it is both a right and a duty to go to the polls and vote for the men of our choice. And particularly because the results of this election could have important effects on the future of the medical profession, I hope you will give serious consideration to each candidate's stand on the important issues concerning state and federal health care programs when you make your decisions on election day.

Remember that every person's vote is important. Numerous elections have been won or lost by unbelievably small margins. It is a fact that less able candidates can be elected by citizens who do not take the trouble to vote, for as James Madison said, "The best way to bring about evil is for good men to do nothing."

Leonard T. Furlow



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Ramblings of the Field Secretary

More than 300 coaches, school administrators, game officials, athletic trainers and doctors attended the St. Louis Medical Society Athletic Injury Conference at the society's auditorium Wednesday evening, September 2. Following the formal program, all were well fed (free) and then were guests of the St. Louis Cardinals Management at the baseball game between the Cardinals and the Milwaukee Braves. The Cardinals won and have done "right well" since that time.

KMOX
SAINT LOUIS

Panel discussion by coaches.

The food was good.

A one hour version of the AMPAC "Barnstormer Film" was shown at a dinner meeting of the Jasper County Medical Society, in Joplin, on Tuesday night, Sept. 8. The added presence of the doctors' wives gave this meeting just the right flavor. The film has special interest for both the doctor and his wife. The reception and reaction to the film, on this occasion seemed most favorable. This one hour film is entertaining, has a real story to tell in the political arena, and isn't too long. It is well recommended for showing at medical society meetings, on all levels, and to meetings of doctors' wives, or to joint meetings of the two groups.

Head table includes, left to right, Dr. and Mrs. Carnes, Dr. and Mrs. Maddox, Mr. Henry Warten and Dr. and Mrs. Papp.

Ready for film showing.

The Annual Greene County Medical Society Golf Tournament was held at Springfield Hickory Hills Country Club on Thursday, September 17. The weather was pleasant with the course in good condition (always too much rough for me,

Drs. Knabb, McCraw and Powell receive prizes from Dr. Lurie.

After Surgery: B and C vitamins are therapy

Therapeutic amounts of B and C in stress formula vitamins often are vital during periods of physiologic stress. STRESSCAPS, designed to meet increased metabolic demands, aids in achieving a more comfortable convalescence, a more rapid recovery. After surgery, as in many stress conditions, STRESSCAPS vitamins are therapy.

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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Drs. Kolze and Gose tied for low gross score.

however). Half of the membership of the medical society must have played this year and all seemed to get a prize of some sort. This tournament grows larger each year and the refreshments, food and entertainment better.

Following a delicious buffet in the evening, Dr. Harold Lurie, Master of Ceremonies, in his usual entertaining way, distributed the many donated prizes, some to the various winners with assigned handicaps completely new to the game.

ACROSS MISSOURI

(Continued from page 900)

under the research support program of the Missouri Heart Association. The Association allocated $37,092 for heart research in the 1964-65 fiscal year and is holding an additional $5,408 in an emergency contingency reserve fund.

The grant-in-aid awards and those receiving them are:

Harry J. Stoeckle, M.D., University of Missouri, $4,921 for his study of "A Micronodule Pacemaker Receiver for the Treatment of Complete Heart Block."

Keith H. Averill, M.D., Research Hospital and Medical Center, Kansas City, $4,240 for his study of "Pulmonary Vasoconstrictive Substances in Hemolyzed Blood."

George C. Kaiser, M.D., St. Louis University, $4,982 for his study on "Myocardial Cathecholemine Metabolism."

Jack M. Martt, M.D., University of Missouri, $4,924 for his study on "Prolonged Reduction of Serum Cholesterol by Hypercholesterolemic Agents."

J. Earle White, M.D., University of Missouri, $4,925 for his study of "Correlation Between Structural Sugar and Fat Mobilization."

Joseph R. Sasano, Jr., M.D., Children's Cardiac Center, Kansas City, $2,600 for his study on "Efficacy of Long Term Continuous Streptococcal Prophylaxis in Prevention of Rheumatic Heart Disease—Intramuscular Benzathine Penicillin G."

Fellowship awards:

Gerald Bedford Lee, M.D., University of Missouri, $6,000 for his study on "Effects of 20-25 Diazacholesterol on Experimentally Induced Atherosclerosis."

Vijay S. Hiremath, M.D., Jewish Hospital, St. Louis, $4,500 for his study on "The Significance of the Late Apical Systolic Murmur."

MISSOURI ACADEMY

(Continued from page 908)

must be summarized. He stated that the trend toward specializations is a trend that needs to be checked and ameliorated, as the need for a family physician is wide, and is more needed now than ever before and will be more needed in the future.

He listed a five point program that, in his opinion, the AAGP should adopt and bring to realization. 1. Change the name to family physician; 2. Define—especially the limits; 3. Work to change medical school curriculum to fit these requirements; 4. Provide graduate education to cover family practice; 5. Set up an examining board to provide certification for this type of training.

He placed special emphasis on the latter, as, in this opinion, Board Certification was attractive to new physicians in that it added social prestige, public stature and glamour to their status in the community, as well as in the eyes of their specialist colleagues. As he said, "The old girl is sick, and you can't sit back and wait—you have to fight fire with fire—and if you can't lick them—then join them."

And with that, the curtain came down. The 1964 SOC Show Boat, with its stacks again belching flame and smoke, and with much tooting of horns and blowing of whistles, cast off its lines and disappeared into the limbo of past, and, "but not forgotten," events.

The Missouri participants went back to their local bailiwicks to continue purveying pills and potents to pale patients and perturbed parents, but much more cognizant of the necessity of drastic change in the policy and precepts of the Academy in the future.

Of special note, was the broad smile on the physiognomy of Bill Shaw, Primary Promulgator of Board Certification for General Practitioners in our local Academy, as he left Muehlebach Landing. He was accused of having subsidized some of the speakers, but to the end, stoutly maintained, affirmed and declared he was innocent.

News—Personal and Professional

MIAMI BEACH PLAYS HOST TO AMA CLINICAL

A scientific program attuned to the current needs and interests of the practicing physician is planned for the 18th clinical convention of the American Medical Association. Immunization, depression, cardiac arrhythmias, vascular occlusive diseases, emphysema, iatrogenic diseases, and hypertension are only a few of the major areas to be explored during the four-day meeting, Nov. 29-Dec. 2. More than 300 physicians will participate in a full program of lectures, exhibits, motion pictures, color television, fireside conferences and breakfast roundtables.

A new feature of the clinical convention this year is a postgraduate course on obstetrics for the general practitioner. Fifteen lectures will be presented during three sessions ranging from infertility and prenatal care through complications of labor and anesthesia to postnatal care and maternal mortality. Chairman of the course is Ralph W. Jack, M.D., Miami.

The entire scientific program, with the exception of the fireside conferences and breakfast roundtables, will be held in Miami Beach Convention Hall. The modern, single-level structure, completed in 1959, is fully air-conditioned and boasts one of the finest sound amplification systems to be found anywhere in the nation. It is located just one block from the Lincoln Road shopping centers, Florida's Gold Coast and the ocean.

The popular fireside conferences, presented as a joint session of the American College of Chest Physicians and the AMA, will be held Sunday night, Nov. 29, at the Fontainebleau Hotel. There will be 11 tables at which 50 to 60 discussion leaders will engage in an informal and free exchange of views on a variety of medical subjects.

Six breakfast roundtables are scheduled at the di Lido Hotel. Topics include cancer of the thyroid, cosmetic surgery and peptic ulcer.

In addition, 125 scientific exhibits will be on display during the meeting, including a special exhibit on fractures, and some 30 medical motion pictures will be shown in the afternoon Monday through Wednesday.

The Sixth National Conference on the Medical Aspects of Sports will be held Sunday, Nov. 29, and many well known sports figures will speak at the day-long conference.

C. B. (Bud) Wilkinson, Oklahoma City, former University of Oklahoma football coach and athletic director, and consultant to the President's Council on Physical Fitness, will be a principal evening speaker. His subject will be, "Building Values Through Athletics." James E. Counsilman, Ph.D., Bloomington, Ind., U. S. Olympic Swimming Coach, will give his "Reflections on the 1964 Olympics" at a luncheon session. Tenley Albright, M.D., Boston, former Olympic skating star, will participate in a discussion of "Sports for Girls." Other speakers include Warren R. Guild, M.D., Boston, who will speak on "The Meaning of Endurance," and Robert A. Moore, M.D., Ypsilanti, Mich., whose topic is "Mental Health Through Sports."

Three prominent men of medicine will deliver mid-day lectures during the AMA Clinical Convention.

Edward R. Annis, M.D., Miami, immediate past president of the AMA, will speak on "The Physician as a Diplomat" on Monday, Nov. 30. Geza de Takats, M.D., Chicago, an eminent vascular surgeon, will discuss "Diabetic Vascular Disease" on the following day. The third lecture, "Medical Aspects of Space Flight," will be presented Wednesday by Col. Andres Ingver Karstens, M.D., an authority on space medicine, now serving with the Air Force Space Systems Division, Los Angeles.

The Committee on Cancer of the American College of Surgeons sponsored a conference on the "Regionalization and Automation of Tumor Registries," in St. Louis in September. Among those participating were **Eugene M. Bricker**, M.D., St. Louis, **John S. Spratt, Jr.**, M.D., Columbia, **H. M. Hardwicke**, M.D., Jefferson City, **G. Ray Ridings**, M.D., Columbia and **Kenneth D. Serkes**, M.D., St. Louis.

The recent Annual Program Conference of Blue Shield Plans, held in Chicago, featured the theme, "Blue Shield: An Appraisal." One of the participants was **Ira C. Layton**, M.D., president of the Kansas City Blue Shield Plan.

The Optimist Club, St. Louis, recently presented **I. C. Middleman**, M.D., St. Louis, with a plaque for his services to the community.

Eighty St. Louis physicians with 25 or more years' service at Deaconess Hospital were honored recently at the Hospital's 75th anniversary dinner. Among the medical staff members with the longest periods of service were (l. to r.): Robert Mueller, M.D., with 39 years; Harold A. Goodrich, M.D., 33 years; Daniel L. Sexton, M.D., 33 years; Joseph C. Peden, M.D., 44 years; and Henry P. Thym, M.D., 35 years.

A dozen Missouri physicians were among the more than one thousand inducted as new Fellows of the American College of Surgeons during special ceremonies in Chicago on October 8. The state doctors who received the distinction are:

James W. Mackenzie, M.D., Columbia
Phillip B. Foreman, M.D., Hannibal
Americo G. Ramos, M.D., Kansas City
W. Ray Snider, M.D., Independence
Kermit Vandenbos, M.D., Richards-Gebaur AFB
Charles J. Ash, M.D., Springfield
Francis J. Burns, M.D., St. Louis
Marcy A. Goldstein, M.D., St. Louis
Dan B. Moore, M.D., St. Louis
Charles L. Roper, M.D., St. Louis
William Shieber, M.D., St. Louis
Lester J. Nathan, M.D., St. Louis

The new Editor of *Executive,* journal of the Medical Society Executives Association, is **Hollister S. Smith**, Executive Secretary of the St. Louis Medical Society. MSEA is an organization of national, state, regional or county society executives of medical organizations.

A copy of a new colored sheet on Parliamentary Procedure, recently published by a Registered Parliamentarian, is available. If you wish a copy, send five cents in coin (no stamps, please) with a self-addressed, stamped envelope to: George F. Schmitt, M.D., 30 S.E. 8th Street, Miami, Florida.

The speaker at a recent meeting of the Jefferson County Heart Council at Festus was **George C. Kaiser**, M.D., of St. Louis.

The new chief of staff at St. John's Hospital, Springfield, is to be **Howard J. McAlhany**, M.D., of Springfield.

The speaker at a recent meeting of the Pine Lawn Chamber of Commerce was **Robert A. Mayer**, M.D., St. Louis, who discussed "Good Health to You."

The guest speaker at a meeting sponsored by the Clinton County Unit of the Missouri Cancer Society in Plattsburg was **Terry E. Lilly**, M.D., Kansas City.

"Angiographic Differentiation of Pyelonephritis and Glomerulonephritis" was the title of a paper presented at the convention of the American Roentgen Ray Society in Minneapolis by **Marvin J. Friedenberg**, M.D., and **Saul Eisen** of St. Louis.

The annual A. Morris Ginsberg Memorial Seminar will be held at the Menorah Medical Center, Kansas City, November 4-5, 1964. The guest speakers will be **Mario Baldini**, M.D., Associate Professor of Medicine, Tufts University School of Medicine, Boston, and **Ernest Beutler**, M.D., Clinical Professor of Medicine, University of Southern California School of Medicine, Los Angeles.

William G. Arney, M.D., St. Louis, has been elected president of the medical staff of Deaconess Hospital, succeeding **James Y. Griggs**, M.D. Other new officers include: **Frederick Martin**, M.D., president-elect; **Robert K. Kurth**, M.D., vice president; **Ernest H. Schaper**, M.D., secretary-treasurer.

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Back in Dickens' day, about the only remedy they had for a bad cough was time—and an occasional sip of rock-and-rye. Nowadays however, when dealing with bronchitis, croup, and URI, you can prescribe with "great expectations" of success by choosing one of Robins' great expectorants.

Although each Robins' antitussive is formulated for a cougher's special need, all contain glyceryl guaiacolate, a superior expectorant that produces significant increases in respiratory tract fluid (RTF) secretions.* By stimulating the natural production of RTF, glyceryl guaiacolate makes fewer coughs more productive so that the cough itself removes the very irritants that cause it.

After millions of prescriptions, no significant side effects have ever been reported from glyceryl guaiacolate. And acceptance of these elegant and highly palatable formulations by patients has always been outstanding. Whenever you treat patients who are coughing "like the dickens," give them relief with one of Robins' great expectorants.

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ROBITUSSIN®

antitussive / demulcent / expectorant

Each 5 cc. (1 tsp.) contains:

Glyceryl guaiacolate	100 mg.

Alcohol 3.5 per cent

ROBITUSSIN® A-C (exempt narcotic)

Robitussin with antihistamine and codeine

Each 5 cc. (1 tsp.) contains:

Glyceryl guaiacolate	100 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.

(Warning: may be habit forming)

Alcohol 3.5 per cent

Robitussin is indicated in coughs associated with head and chest colds, bronchitis, laryngitis, tracheitis, pharyngitis, pertussis, "flu," "grippe," measles, chronic paranasal sinusitis, pulmonary tuberculosis, or smoking. Robitussin A-C is especially indicated for allergic, harsh or unresponsive coughs.

dosage: ADULTS—1 tsp. every 3 to 4 hours. CHILDREN—½ tsp. every 3 to 4 hours.

side effects: No serious side effects from glyceryl guaiacolate have ever been reported. Nausea, G-I upset, and drowsiness may be encountered rarely with Robitussin A-C.

precautions: There are no contraindications for Robitussin. Robitussin A-C is contraindicated in patients hypersensitive to antihistamines or codeine.

DIMETANE® EXPECTORANT

antihistaminic / antitussive

Each 5 cc. (1 tsp.) contains:

Dimetane® (brompheniramine maleate)	2 mg.
Phenylephrine hydrochloride	5 mg.
Phenylpropanolamine hydrochloride	5 mg.
Glyceryl guaiacolate	100 mg.

Alcohol 3.5 per cent in a palatable, aromatic base.

DIMETANE® EXPECTORANT-DC (exempt narcotic)

antihistaminic / antitussive / suppressant

Codeine phosphate (Warning: may be habit forming)	10 mg.
Dimetane® (brompheniramine maleate)	2 mg.
Phenylephrine hydrochloride	5 mg.
Phenylpropanolamine hydrochloride	5 mg.
Glyceryl guaiacolate	100 mg.

Alcohol 3.5 per cent in a palatable, aromatic base.

Indicated for relief of cough and allergic states in which an expectorant action is useful. Dimetane Expectorant-DC is indicated when the cough suppressant action of codeine is desired.

dosage: ADULTS—1 to 2 tsp. q.i.d., as necessary. CHILDREN—½ to 1 tsp., t.i.d. or q.i.d.

side effects: Overdosage may result in mild drowsiness or excitement, but within the therapeutic range neither is likely.

Precautions: Administer with caution to patients with cardiac or peripheral vascular diseases and hypertension.

contraindications: Hypersensitivity to antihistamines or codeine. Not recommended for use during pregnancy.

references:* Boyd, E. M., and Ronan, A. K.: Am. J. Physiol., 135:383, 1942.

DEATHS

Hobbs, Alonzo G., M.D., St. Louis, a graduate of St. Louis College of Physicians and Surgeons, 1922; member of St. Louis County Medical Society; aged 75; died June 18, 1964.

Talbott, Hudson, M.D., Louisville, Kentucky, a graduate of Marion Sims College, 1898; member of St. Louis Medical Society; aged 90; died August 13, 1964.

Williamson, Oscar E., M.D., St. Louis, a graduate of St. Louis University, 1929; member of St. Louis County Medical Society; aged 64; died August 14, 1964.

Gaston, Ralph E., M.D., St. Louis, a graduate of St. Louis University, 1916; member of St. Louis County Medical Society; aged 74; died August 25, 1964.

Lawless, Charles L., M.D., Marshall, a graduate of Washington University, 1899; member of Saline County Medical Society; aged 88; died August 25, 1964.

Gay, George, M.D., Ironton, a graduate of Washington University, 1926; member of Mineral Area County Medical Society; aged 68; died August 31, 1964.

Gissy, Carl J., M.D., St. Louis, a graduate of St. Louis University, 1921; member of St. Louis Medical Society; aged 66; died September 2, 1964.

Gowen, Leo F., M.D., St. Louis, a graduate of Temple Medical College, 1938; member of St. Louis County Medical Society; aged 53, died September 6, 1964.

Hartmann, Alexis F., M.D., St. Louis, a graduate of Washington University, 1921; member of St. Louis Medical Society, aged 66; died September 6, 1964.

Todd, Thomas B., M.D., Nevada, a graduate of University Medical College of Kansas City, 1900; member of West Central Missouri Medical Society, aged 86; died September 8, 1964.

Perry, John M., M.D., Princeton, a graduate of Physicians and Surgeons College, 1902; member of Grand River County Medical Society; aged 88; died September 9, 1964.

Willis, Norman E., M.D., Poplar Bluff, a graduate of Western Reserve Medical School, 1947; member of Butler-Ripley-Wayne County Medical Society; aged 41; died September 10, 1964.

Jeffries, Robert C., M.D., Kansas City, a graduate of the University of Kansas, 1933; member of Jackson County Medical Society, aged 57; died September 17, 1964.

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Of 507 patients with confirmed ear, nose and throat infections... 465 or 91.7% were treated successfully with Signemycin®

Note:
Adams,* whose 50 patients included 20 with ENT infections, stated that Signemycin "was particularly valuable in infections that did not respond to other antimicrobial agents, and in patients to whom penicillin could not be given." All his cases responded within five days; in most patients, all signs of infection disappeared in three days.

*Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957.

Condition	No. of Patients	No. Cured with Signemycin
Otitis media	90	86
Pharyngitis and laryngitis	162	148
Sinusitis	68	55
Tonsillitis and peritonsillitis	163	153
Various	24	23
Totals	507	465 (91.7%)

consistently effective...often when others fail

Signemycin®

tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg.

capsules (250 mg.)

Also available as Syrup, Pediatric Drops, and half-strength Capsules

Brief Summary and Bibliography follow.

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New Members

John M. Anderson, M.D., 1420 Grattan St., St. Louis, has become a member of St. Louis Medical Society. Dr. Anderson is a native of Denver, Colorado, received his preliminary education at Colorado State University, and his M.D. degree at Meharry Medical College in 1958. He specializes in psychiatry.

Hugh Chaplin Jr., M.D., 509 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Chaplin is a native of New York, New York, received his preliminary education at Princeton University, and his M.D. degree at Columbia University in 1947. He specializes in internal medicine.

John K. Day, M.D., Community Medical Bldg., Bowling Green, has become a member of Pike County Medical Society. Dr. Day is a native of Summersville, Missouri, received his preliminary education at the University of Missouri, and his M.D. degree at the University of Missouri in 1961. He specializes in general practice.

Bernard Draper, M.D., 329 Main St., Boonville, has become a member of Cooper County Medical Society. Dr. Draper is a native of Nebo, Illinois, received his preliminary education at Washington University, and his M.D. degree at the University of Illinois in 1954. He specializes in obstetrics and gynecology.

Gary A. Draper, M.D., 329 Main St., Boonville, has become a member of Cooper County Medical Society. Dr. Draper is a native of Nebo, Illinois, received his preliminary education at the University of Illinois, and his M.D. degree at the University of Illinois in 1961. He specializes in general practice.

Ben C. Harmon, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Harmon is a native of Fort Worth, Texas, received his preliminary education at Texas Christian University, and his M.D. degree at Washington University in 1960. He specializes in surgery.

William B. Hutchinson, M.D., 16 Hampton Village Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Hutchinson is a native of Little Rock, Arkansas, received his preliminary education at Arkansas A and M College, and his M.D. degree at Washington University in 1956. He specializes in radiology.

Douglas R. Lilly, M.D., 52 Maryland Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Lilly is a native of Cape Girardeau, Missouri, received his preliminary education at Princeton University, and his M.D. degree at Washington University in 1956. He specializes in internal medicine.

James N. McClure Jr., M.D., 4940 Audubon Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. McClure is a native of Washington, Mo., received his preliminary education at Washington University, and his M.D. degree at Washington University in 1955. He specializes in psychiatry.

Edward Okun, M.D., 4511 Forest Park Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Okun is a native of Springfield, Massachusetts, received his preliminary education at Dartmouth College, and his M.D. degree at the University of Vermont in 1956.

Ted P. Smith, M.D., Community Medical Bldg., Bowling Green, has become a member of Pike County Medical Society. Dr. Smith is a native of Rolla, Missouri, received his preliminary education at Central College, and his M.D. degree at the University of Missouri in 1961. He specializes in general practice.

Robert L. Strobach, M.D., State Bank Bldg., Butler, has become a member of West Central Missouri County Medical Society. Dr. Strobach is a native of St. Louis, Missouri, received his preliminary education at Notre Dame University, and his M.D. degree at the University of Kansas in 1963. He specializes in general practice.

Paul G. Stromsdorfer, M.D., 6806 Pershing Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Stromsdorfer is a native of St. Louis, Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1960. He specializes in Pathology.

Robert W. Tatkow, M.D., 4919 Forest Park Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Tatkow is a native of Brooklyn, New York, received his preliminary education at the University of Wisconsin, and his M.D. degree at St. Louis University in 1957. He specializes in orthopedics.

Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®

Note:

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.[1-87]
In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

Condition	No. of Patients	No. Cured with Signemycin
Ear, nose and throat infections	507	465
Respiratory infections	1,028	954
Gastrointestinal infections	425	387
Genitourinary infections	748	684
Skin and soft-tissue infections	1,088	1,036
Bone and joint infections	71	64
Deep-seated or generalized infections	257	251
Obstetrical & gynecological infections	341	320
Miscellaneous conditions	592	570
Totals	5,057	4,731 (93.5%)

consistently effective...often when others fail

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tetracycline HCl, 167 mg.; oleandomycin as triacetyloleandomycin, 83 mg.

capsules (250 mg.)

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County Society News

FIRST DISTRICT

JOSEPH L. FISHER, M.D., ST. JOSEPH, COUNCILOR

Buchanan County Medical Society

The first fall meeting of the Buchanan County Medical Society was held on September 2 at St. Joseph State Hospital. Sixty members and guests attended the session. William B. Rost, M.D., president, presided at the business meeting and program.

Dr. Richard O. Craig introduced the speaker, Dr. William V. McKnelly, Jr., Assistant Professor of Psychiatry at Kansas University Medical Center. Dr. McKnelly presented an excellent discussion on "Office Psychiatry," well illustrated with slides.

Arrangements for the meeting were made by the program committee: Dr. Edmund W. Kline, Chairman, and Drs. Charles R. Willman and Joe S. Gunter.

Irwin Rosenthal, M.D., *Secretary*

Grand River County Medical Society

Forty-four members, wives and guests met on September 10, at the Strand Hotel in Chillicothe, Mo. for the first fall meeting of the Grand River Medical Society.

Following dinner Charles B. Wheeler, M.D., Pathologist, Kansas City, Mo. spoke on "A Medical Examiners Law for Missouri."

During a brief business meeting, it was decided that an eye bank sub-station for the Grand River area would be established at the Chillicothe Hospital. A discussion about oral polio vaccine and pap smear tests completed the evening's business.

Jack L. Vinyard, M.D., *Secretary*

SECOND DISTRICT

LYSLE M. BACH, M.D., HANNIBAL, COUNCILOR

Chariton-Macon-Monroe-Randolph Counties Medical Society

John Higginson, M.D., Professor of Pathology, University of Kansas Medical Center, Kansas City, Kansas, spoke at a dinner meeting of the Chariton-Macon-Monroe-Randolph Medical Society on Thursday evening, September 10. As usual, this regular monthly meeting of the society was held at the Woodlawn Hospital, Moberly. The subject of his discussion was "Cancer Variations Around the World." In his talk, he touched on certain types of cancers which appear most in various parts of the world. A part of his discussion included lung cancer and smoking.

Guests present in addition to the speaker, included Dr. James Harms, son of Dr. F. L. Harms of Salisbury, Dr. Mel Kyes, Salisbury, and Mr. Jerry Patton, St. Louis Blue Shield representative. During the business session, Mr. Patton discussed the filling out of Blue Shield forms.

Members present included: Chariton County—Drs. F. L. Harms, D. D. Stuart and G. C. Rice; Macon County—Drs. D. E. Eggleston and James E. Campbell; Monroe County—Dr. F. A. Barnett; Randolph County—Drs. Josephine Baker, Avery Rowlette, J. Will Fleming, Thomas S. Fleming, W. D. Chute, C. C. Cohrs, L. E. Huber, Robert Hasson and P. V. Dreyer.

J. Will Fleming, M.D., *Secretary*

FOURTH DISTRICT

PAUL ROTHER, M.D., ST. CHARLES, COUNCILOR

Lincoln-St. Charles County Medical Society

Raymond O. Muether, M.D., St. Louis, Associate Professor of Medicine, St. Louis University Medical School, spoke at a dinner meeting of the Lincoln-St. Charles County Medical Society, Tuesday night, September 29. The meeting was held at the Southern Air in Wentzville. Dr. Muether spoke on "The Aging Kidney."

The meeting was well attended.

The evening program began with a social hour, dinner and then Dr. Muether's informative discussion. A short business session preceded adjournment.

Robert J. Fleming, M.D., *Secretary*

SIXTH DISTRICT

ROLLA B. WRAY, M.D., NEVADA, COUNCILOR

Henry, Johnson, Pettis, Saline, Lafayette-Ray County Medical Societies

Ninety people including physicians, their wives and guests of the Henry, Johnson, Pettis, Lafayette-Ray, Saline and adjacent County Medical Societies attended a dinner meeting at the new Holiday Inn at Sedalia on Wednesday night, September 16. This gala affair began with social refreshments at 6:30 p.m. followed by dinner and then the scientific program. After dinner, the ladies held a separate meeting and enjoyed an interesting program on "Interior Decorating" presented by Mrs. Mary Studer of the Homakers Furniture Store in Sedalia.

90 people attended.

Dr. Berry answers a question after meeting.

The doctors were privileged to hear an excellent discussion by Maxwell G. Berry, M.D. of Kansas City, Mo., on "The Clinical Diagnosis of Multi-System 'Auto-Immune' Disease." Dr. Berry presented his subject in his usual witty, interesting and question provoking way. An extended general discussion followed his formal presentation.

During the dinner, a number of physicians and their wives, who have recently located in the area, were introduced along with other guests who were present.

It was decided to hold the next joint meeting of the group in November, again in Sedalia, which seems to be a more central point of meeting for all of the societies concerned.

E. M. Braverman, M.D., *Secretary*
Pettis County Medical Society

West Central Missouri Medical Society

A dinner meeting of the West Central Missouri Medical Society and the doctors' wives was scheduled to be held in El Dorado Springs Thursday evening, October 8, but had to be cancelled due to unforeseen circumstances. The featured speaker of the evening was to have been James T. Brown, M.D., of Springfield, with a presentation on the "Surgical Aspects of Peripheral Vascular Disease."

It's hoped that the meeting with the same program can be rescheduled at a later date. Members and interested parties will be notified as to future plans.

Roy W. Pearse Jr., M.D., *Secretary*

NINTH DISTRICT

E. A. STRICKER, M.D., ST. JAMES, COUNCILOR

Mid-Missouri County Medical Society

A dinner meeting of the Mid-Missouri County Medical Society and the doctors' wives was held Thursday night, September 24 at the Bell Motel, "Redwood Cafe" at Lebanon, Mo. A social hour preceded dinner and the program. The scientific speaker for the evening was Lester E. Wolcott, M.D., Chief of the Section of Physical Medicine and Rehabilitation at the University of Missouri Medical School in Columbia, Mo. He spoke on the subject of "Recent Advantages in Prosthetics and Orthotics." Dr. Wolcott is also Chairman of the Committee on Post-Graduate Medical Education at Missouri University Medical School. His discussion was well received by all present.

M. K. Underwood, M.D., *Secretary*

(Continued on page 968)

EDITORIAL

In the American Medical Association's long history of fostering the continuing education of practicing physicians, the 18th clinical convention next November 29-December 2 in Miami Beach marks another milestone.

An excellent scientific program has been planned for the meeting. Particularly noteworthy is the postgraduate course on obstetrics, consisting of a comprehensive series of lectures by outstanding teachers.

Other sessions are devoted to timely subjects of wide interest and will be followed by question-and-answer or discussion periods. The fireside conferences and breakfast roundtables will provide further time for informal discussion.

There is today an acute awareness of the need for continuing education throughout the medical profession. Much effort is currently being exerted to provide better educational opportunities for practicing physicians. Yet, learning obviously remains an individual matter which rests on the personal initiative of each physician.

I urge every physician who possibly can to take advantage of the educational opportunity represented by the clinical convention.

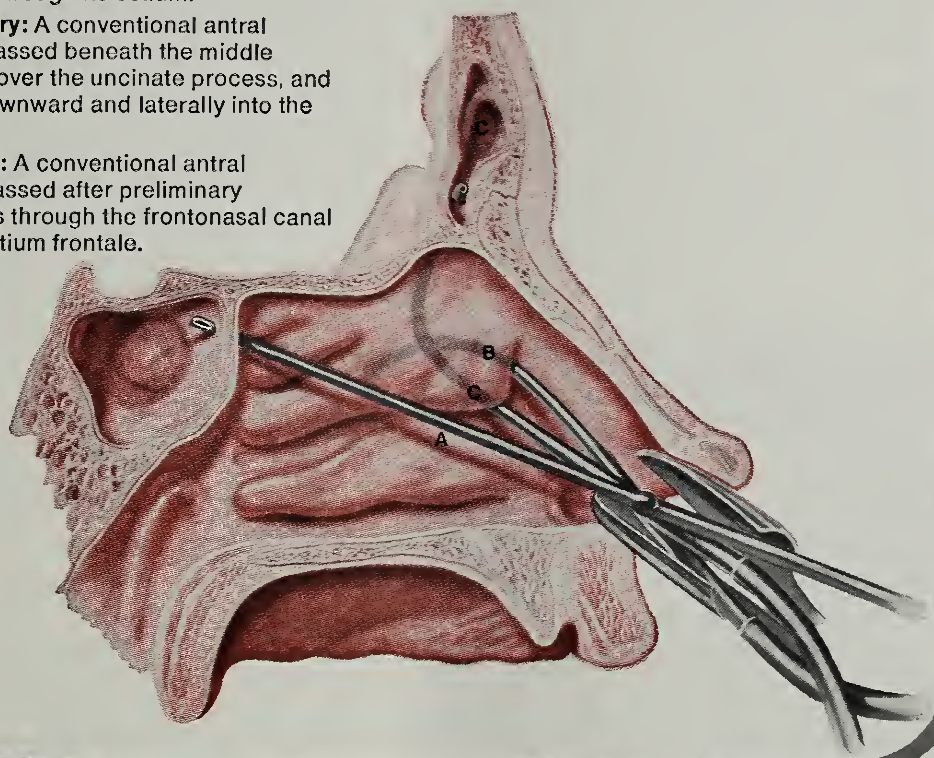
Donovan F. Ward, M.D., President
American Medical Association

A rhinologic approach to the sinuses
Sagittal anatomical section of nasal cavity showing approach for probing or irrigation by cannulas.

A–Sphenoid: A sphenoid cannula (under 13.5 cm.) passed around the middle and superior turbinates to the anterior wall of the sinus through its ostium.

B–Maxillary: A conventional antral cannula passed beneath the middle turbinate, over the uncinate process, and rotated downward and laterally into the ostium.

C–Frontal: A conventional antral cannula passed after preliminary maneuvers through the frontonasal canal into the ostium frontale.



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*Reed, G. F.: Sinusitis, New England J. Med. 267:402, Aug. 23, 1962.

From the Medical Schools

ST. LOUIS UNIVERSITY

Internal Medicine Program

A continuing medical education conference entitled Recent Developments in Endocrinology and Nephrology will be presented in Miller Hall of Firmin Desloge Hospital, 1325 S. Grand Blvd. on Wednesday, November 18. Conference Director will be Dr. Thomas Frawley, Director, Department of Internal Medicine, St. Louis University. The program will be held from 9:30 to 4:30 p.m. with registration scheduled to begin at 9 a.m.

Topics to be covered will include: Current Knowledge of LATS, TSH, EPS, Diagnosis and Management of the Hirsute Female, Recognition and Treatment of the Hypoparathyroid Patient, The Use of Radio-Isotopes in the Diagnosis of Endocrine and Renal Diseases, Immunoassay of Pituitary Hormones, Renal Tubular Defects, The Status of Chronic Dialysis in Uremia, The Erythrocyte Picture in Renal Diseases.

The one day conference will deal with the areas of important concern to the internist and emphasize the practical as well as the scientific aspects of endocrine and renal disorders of major interest, it has been announced by Dr. Frawley.

An unusual feature of the conference will be opportunities for registrants to participate in the course. The morning session will feature four formal presentations, after which all the morning speakers will form a panel to answer questions from the floor. At luncheon, the registrants will be seated at tables of eight, each with one of the speakers as a discussion leader. Informal round table conferences covering topics of special interest to each physician have been planned. The afternoon session will feature three brief formal presentations, followed by a panel of afternoon speakers. For a copy of the detailed program, physicians may write to: Dr. Leonard S. Stein, Dean, Metropolitan College, Saint Louis University, 221 North Grand Blvd.

Appointments

Dr. John Garrett, formerly assistant professor of medicine at Albany Medical College, has been named associate professor of internal medicine and director of a new Division of Renal Disease in the Department of Internal Medicine at the St. Louis University School of Medicine. The division will be quartered at the St. Louis University Hospitals in the Internal Medicine Department headed by Dr. Thomas F. Frawley. Dr. Garrett received the M.D. degree from Harvard University Medical School in 1951. He has been associated with an artificial kidney unit at Albany Medical College, where he was an NIH research fellow from 1952 to 1954 and an assistant in medicine from 1952 to 1955.

Four new faculty members have joined the Department of Neurology and Psychiatry at the St. Louis University School of Medicine. Dr. William E. Holt, assistant professor of psychiatry at the University of Pennsylvania since 1953, has been appointed associate clinical professor of psychiatry. He has been engaged in the active practice of psychiatry in the Philadelphia community since 1951, and has had wide experience teaching at the undergraduate and graduate levels. He was a staff member of the Hospital of University of Pennsylvania, Institute of Pennsylvania Hospital and Philadelphia Psychiatric Hospital. He also assisted in the direction of the residency program at the University of Pennsylvania, and was consultant and lecturer at the Veterans Administration Hospital in Philadelphia and the Delaware State Hospital in Wilmington. Dr. Holt received the M.D. degree from the University of Pennsylvania School of Medicine, and took his internship and residency training in neurology and psychiatry at the Hospital of the University of Pennsylvania. He continued postdoctoral studies at the Philadelphia Psychoanalytic Institute.

Dr. George H. Zimney, formerly associate professor of psychology at Marquette University, has been appointed associate professor of psychology. After completion of undergraduate studies at Loyola University (Chicago), Dr. Zimney received the Ph.B. and M.A. degrees from Loyola University in Chicago, and the Ph.D. degree in experimental psychology from the University of Minnesota.

Dr. Julius Ehik, assistant director, psychiatric service at Veterans Administration Hospital in

St. Louis, has been appointed instructor in psychiatry. He received the M.D. degree from Pazmany Peter University of Sciences, Budapest, Hungary. He took his internship at McKennan Hospital at Sioux Falls, South Dakota and his residency at Veterans Administration Hospital in St. Louis, where he has been assistant chief of Psychiatry and Neurology Service.

Dr. Edward L. Eyerman, formerly associated with the Columbia University Neurological Institute, has been named assistant professor of neurology. A graduate of Yale Medical School, Dr. Eyerman interned at the University of Virginia Hospital after which he spent two years as a clinical associate at Nationl Institutes of Health.

The Institute for Molecular Virology of Saint Louis University School of Medicine has been awarded a $278,000 contract by the Vaccine Development Program of the National Institutes of Health for the support of a research program concerned with a study of the molecular structure of cancer-producing and noncancer-producing human viruses. Dr. Maurice Green is Director of the Institute and will head the research program.

WASHINGTON UNIVERSITY

Dr. Edward W. Dempsey, dean of Washington University School of Medicine, St. Louis, has been named by President Lyndon B. Johnson as special assistant to Anthony J. Celebrezze, Secretary of Health, Education and Welfare. The nomination has been confirmed by the Senate. Dr. Dempsey succeeds Boisfouillet Jones, who is now executive director of the Woodruff Foundation, Atlanta, Georgia. Dr. Dempsey resigned as dean of the medical school to accept the post and has taken a leave of absence from his position as professor and head of the department of anatomy.

In the Department of Health, Education and Welfare, Dr. Dempsey will act as an advisor on matters of public health and medical problems, and will make recommendations on the budget for the National Institutes of Health and on the safety of new drugs.

Dr. Dempsey was recently appointed chairman of the Manpower Panel of the President's Commission of Heart Disease, Stroke and Cancer. He was a member of the Medical Education Delegation of the Department of Health, Education and Welfare which visited the Soviet Union last fall. He has also served as a member of the National Advisory Health Council, and has been president of the American Association of Anatomists.

Dr. Dempsey graduated from Marietta College in Ohio and received his M.S. and Ph.D. from Brown University. He holds honorary degrees from Marietta College and Harvard University.

From 1937 to 1950, he was a member of the faculty of the Harvard Medical School. He came to Washington University in 1950 as professor and head of the department of anatomy. In 1958 he was named dean in addition to his other positions.

Dr. Dempsey's research has dealt with the anatomy and physiology of reproduction, electrophysiology of forebrain mechanisms, chemical histology and cytology of mammalian organs and tissues. He is regarded as a pioneer in the use of the electron microscope.

Dr. M. Kenton King

Dr. M. Kenton King has been named acting dean of Washington University School of Medicine, St. Louis, Chancellor Thomas H. Eliot has announced. Dr. King has been associate dean of the school since 1962.

Dr. King will assume all the duties of the dean until a permanent dean is named, Chancellor Eliot said. During his term as dean he will also continue his responsibility for student affairs. A committee to recommend a new dean has been appointed and is at work to secure a nominee for the post.

The vacancy was brought about by the resignation of Dr. Edward W. Dempsey who resigned to take a post as special assistant to Secretary of Health, Education and Welfare Anthony J. Celebrezze.

Dr. King joined the faculty of Washington University School of Medicine in 1957. He was physician in charge of the Student Health Service from 1957 to 1962. He also holds the title of assistant professor of medicine and of preventive medicine.

He received his B.A. degree from the University of Oklahoma and his M.D. degree from Vanderbilt University School of Medicine. He took post-graduate training at Barnes Hospital and Vanderbilt University Hospital and spent two years as a research fellow in microbiology at Johns Hopkins University School of Medicine.

Dr. Alexis F. Hartmann, Sr., physician-in-chief of St. Louis Children's Hospital, and head of the pediatrics department of Washington University School of Medicine, St. Louis, for 28 years, died September 6, 1964.

Dr. Hartmann received his B.S. from Washington University. He completed a concentrated course and received his M.S. and M.D. degrees at the age of 23 from Washington University School of Medicine. He was elected to Alpha Omega Alpha and awarded the Gill prize as the outstanding student in pediatrics.

Dr. Hartmann was among early explorers in the treatment of juvenile diabetes with insulin. He was named the first winner of the Abraham Jacobi Award by the American Medical Association section on Pediatrics in 1962 "In Recognition of Outstanding Achievements in Pediatrics." He did metabolic studies on gastric juices which led to the development of the Hartmann's solution used in the treatment of acidosis, alkalosis, and dehydration. He did research on nephrotic edema and on children's hypoglycemia.

In recent years, Dr. Hartmann has done studies on children with special disturbances of carbohydrate metabolism and has helped initiate studies on the development on infants and children with birth anomia.

Dr. Hartmann's colleagues and former students paid tribute to his services in appreciative articles published in the June issue of the *Journal of Pediatrics,* which was dedicated to him.

Two Washington University medical professors were among 35 alumni of the University of Minnesota Mayo Foundation for Medical Education and Research who received the university's outstanding achievement award in Rochester, Minn., on September 17.

Dr. Paul E. Lacy, professor and head of the department of pathology, was honored for his research on insulin-producing tumors and for studies of the pancreatic islets. Dr. Sarah A. Luse, professor of anatomy and pathology, was honored for her research on the central nervous system and on the ultra-structure and nature of cancer cells.

Appointments

Eight new assistant professors and an associate professor have been appointed to the faculty of Washington University School of Medicine.

Dr. Walter Wiest, associate professor of biochemistry in obstetrics and gynecology, has been associate professor of biochemistry at the University of Utah. From June 1960 through June 1961, he was a USPHS and Population Council Special Fellow for study at the Universitates Frauenklinik, Cologne, Germany. Dr. Wiest holds degrees from Brigham Young University and the University of Wisconsin.

Appointed assistant professors were Dr. William M. Cowan, Dr. Joseph Eigner, Dr. Julian Fleischman, Dr. Herbert Gass, Dr. P. Ruben Koehler, Drs. Milton and Sondra Schlessinger and Dr. William Sly.

Dr. William Max Cowan, assistant professor of anatomy, has been lecturer in anatomy at Balliol College, Oxford, England, and a fellow in anatomy at Pembroke College, Oxford. He holds degrees from the University of Witwatersrand, Johannesburg, South Africa, and Oxford.

Dr. Joseph Eigner, assistant professor of microbiology, has been a research associate in the department of biological chemistry at the University of Michigan Medical School as a NSF fellow and NIH genetic trainee. Dr. Eigner holds degrees from Dartmouth College and Harvard University.

Dr. Herbert Gass, assistant professor of medicine, has been professor of dermatology at Christian Medical College, Vellore, India. Dr. Gass received his degrees from Washington University School of Medicine, St. Louis, and Christian Medical College, Vellore.

Dr. Julian B. Fleischman, assistant professor of preventive medicine and microbiology, has been doing post-doctoral work at Weizman Institute, Rehovoth, Israel. He has also done work at the Pasteur Institute in Paris, and the Wright-Fleming Institute of Microbiology, London. Dr. Fleischman holds degrees from Yale and Harvard Universities.

Dr. P. Ruben Koehler, assistant professor of radiology, has been Director of the Lymphangiography Project at Philadelphia General Hospital. He was also an instructor in radiology at Temple University School of Medicine, Philadelphia. Dr. Koehler received his M.D. degree from the Medical Faculty of the University of Berne, Switzerland.

Drs. Milton and Sondra Schlessinger, assistant professors of microbiology, have been research associates in the department of biology at Massachusetts Institute of Technology. Dr. Milton Schlessinger received his B.S. from Yale University and his Ph.D. from the University of Michigan. He holds a M.S. in biophysics from the University of Rochester. His wife received her B.S. and Ph.D. degrees from the University of Michigan.

Dr. William Sly, assistant professor of medicine, has been a research associate in the department of biochemistry at the University of Wisconsin. Dr. Sly did research last year at the Laboratoire D'Enzymologie Centre National de la Rochercher Scientifique Gif-sur-Yvette, France. He received his M.D. degree from St. Louis University School of Medicine.

UNIVERSITY OF MISSOURI

Trips and Talks

Dr. James T. Barret, Associate Professor of Microbiology, visited Drs. Evans, Scherp and Folk at the National Institute for Dental Research, National Institutes of Health concerning research with enzymes and proenzymes as immunologic reagents.

Dr. Richard M. Hyde, Assistant Professor of Microbiology, presented a 30-minute talk and moderated a panel on Autoimmune Diseases during a Basic Sciences Conference at the University of Missouri Medical Center. The Conference was held on August 22 for third and fourth year medical students.

Dr. Frank B. Engley, Jr., Professor and Chairman of the Department of Microbiology at the University of Missouri Medical Center, visited Southern Illinois University in Carbondale on September 1 and 2 then continued his trip as he visited Williams and Wilkins, publishers, and the Baltimore Biological Laboratories in Baltimore, Maryland, the Army Biological Laboratories in Frederick, Maryland, N.I.H., and other governmental agencies in the Washington area. Dr. Engley participated in a United States Public Health Service Communicable Disease Center Training Course on the "Microbiology of the Hospital Environment" in Atlanta, Ga., September 21 to 25. Dr. Engley presented talks and discussions on Disinfection and Disinfectants. He is the author of numerous papers on the subject of sterilization, antiseptics and disinfectants. He is a Consultant to the Committee on Drugs of the American Medical Association in the local area. He is also a member of the American Public Health Association Committee on Germicides and is Chairman of the Committee on Laboratory Phases of Sanitation of the American Public Health Association.

Dr. David G. Hall, Professor and Chairman of the Department of Obstetrics and Gynecology at the Medical Center, gave two lectures at a meeting of the Iowa City Gynecological and Obstetrical Society in Iowa City, Iowa on September 8 through 10. The titles of the lectures were "Toxemia of Pregnancy—Experience at the University of Missouri Medical Center" and "Diagnosis and Management of Far Advanced Molar Pregnancy."

Donald F. Kausch, Ph.D., Assistant Professor of Clinical Psychology at the Medical Center, attended meetings relative to training of psychologists and use of diagnostic instruments at a meeting of the American Psychological Association in Los Angeles on September 4 through 9. About 5,000 psychologists attended the annual meeting.

Dr. Robert L. Jackson, Professor and Chairman of the Department of Pediatrics at the University of Missouri Medical Center attended the St. Louis Academy of General Practice meeting in St. Louis, August 23. The topic of discussion was new concepts in chest disease and Dr. Jackson attended a seminar on chest diseases.

Dr. Robert L Russell, Associate Professor of Pharmacology, has been appointed as a consultant to the Council on Drugs for the 1965 edition of *New Drugs,* formerly *New and Nonofficial Drugs*. The American Medical Association sponsors the Council. Dr. Russell and O. L. Webb, NIH Predoctoral Fellow, attended the Fall Meeting of the American Society for Pharmacology and Experimental Therapeutics at the University of Kansas, Lawrence, Kansas on August 24 through 27. A paper entitled "Seizure Threshold Changes and Hepatic Damage in Rats Chronically Convulsed with Hexafluorodiethyl Ether (Indoklon)" by O. L. Webb, Dr. J. F. Porterfield, Assistant Professor of Pathology, and Dr. Russell, sponsored by Dr. B. A. Westfall, Professor and Chairman of the Department of Physiology and Pharmacology, was presented at the meeting by Mr. Webb.

Dr. Robert E. Froelich, Assistant Professor of Psychiatry, gave a paper entitled "Psychiatric Inoculation in the Peace Corps" at the Mid-

Continent Psychiatric Association Annual Meeting in Hot Springs, Arkansas. Dr. Henry Guhleman Jr., Clinical Associate Professor of Psychiatry; Dr. Joseph W. Lamberti, Assistant Professor of Psychiatry, and Dr. Froelich worked with the Peace Corps program at the University of Missouri the past summer. The program graduated 61 volunteers to go to Ecuador, South America.

Dr. Theodore F. Henrichs, Ph.D., Assistant Professor of Medical Psychology, attended a conference of state officers as representative of Missouri Psychological Association at a meeting of the American Psychological Association in Los Angeles on September 3 through 7. Dr. Henrichs attended various meetings relevant to the work of "medical psychologists" and the field of clinical psychology. Approximately 8,000 psychologists attended the meeting.

Dr. Hugh E. Stephenson Jr., Professor of Surgery, attended the Conference on Mechanical Devices to Assist the Failing Heart, which was sponsored by the Committee on Trauma of the National Research Council and National Academy of Science in Washington, D. C. on September 9 and 10.

Dr. Marion S. DeWeese, Professor and Chairman of the Department of Surgery, was a participant and principal speaker at the annual post-graduate Clinic Day of the St. Joseph Hospital in Denver, Colorado August 12. Dr. DeWeese presented two lectures on "Mechanistic Approach to Thromboembolism" and "Surgery and Renal Hypertension."

COUNTY SOCIETY NEWS

(Continued from page 961)

TENTH DISTRICT

W. D. ENGLISH, M.D., CARDWELL, COUNCILOR

Dunklin County Medical Society

Approximately twenty-five doctors from the bootheel area attended a dinner meeting sponsored by the Dunklin County Medical Society at the Cotton Boll Hotel in Kennett on Tuesday night, September 15. A social hour preceded dinner and the program. Social refreshments and dinner were compliments of the local medical society. The guest speaker for the evening was Henry Turner, M.D., Professor of Obstetrics and Gynecology, University of Tennessee Medical School at Memphis. He spoke on "Office Gynecology and Difficult Obstetrics." Guests at the meeting, in addition to Dr. Turner, were Mr. John Noble of Kennett and Mr. Raymond McIntyre, Field Secretary of the Missouri State Medical Association.

An interested audience.

Informal discussion after meeting.

E. L. Spence, M.D., *Secretary*

Mineral Area County Medical Society

Alan F. Denk, M.D., Department of Surgery, St. Louis University Medical School, spoke at a meeting of the Mineral Area County Medical Society, on Thursday night, September 24. The meeting was held in the Hoctor Building of the State Hospital in Farmington. Dr. Denk gave an interesting talk on "Varicose Veins" illustrated with slides. His appearance at this meeting was sponsored by St. Louis University Medical School in cooperation with the Missouri Academy of General Practice and the Medical Education and Hospitals Committee of the Missouri State Medical Association.

C. W. Chastain, M.D., *Secretary*

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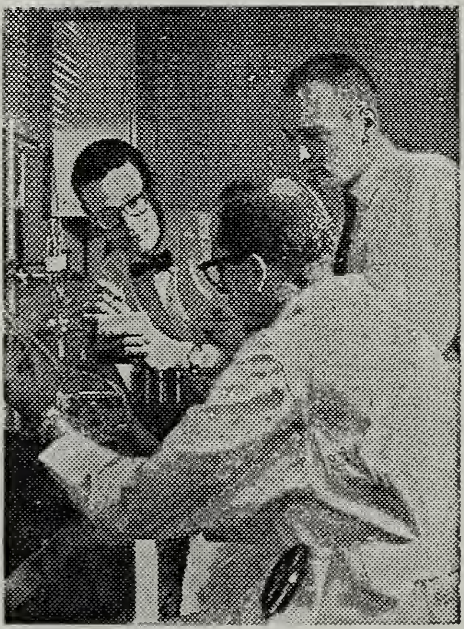

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LEO H. POLLOCK, M.D.

Missouri Medicine in Review

FORTY YEARS AGO

D. G. Stine, M.D., Columbia, Missouri, reports excellent results in the use of camphor in correcting vasomotor collapse. "I wish to make a plea for the very early use of large doses of camphor in those toxemias, that we recognize as resulting in provocative pulmonary lesions, and also during the early hours of pneumonia; and that the drug be pushed until results are obtained, just as quinine is used in malaria.

Between the family physician of the old days, who carried with him hope and good cheer if not antitoxin and serum, and the modern specialist, who is so busy with a crowded practice and writing papers and attending meetings that he is through when his diagnosis is correctly made, there was another type of man—the man who kept abreast of, or even led, the scientific work of his day but still carried with him affection and sympathy and who was not only respected but loved by all whom he strove to serve. The present year has unfortunately marked the passing of a group of men of this type. Among them we mention the names of Drs. Wm. F. Kuhn and J. D. Griffith, of Kansas City; W. A. McCandless, F. A. Glasgow and Gustave Vogt, of St. Louis. Not only to the scientific achievements and the prominence they attained in their profession but to their love for humanity do we join in paying tribute to their memory.

A sign of the change in the needs of practitioners is shown by the success of the recent Clinical Fall Conference in Kansas City, October 13-18. Audiences of twelve to fifteen hundred listened with patience and attention to the various clinical addresses. The sessions were well attended. Contrast this with the average society meeting, either county or state. It must be that the one type of meeting supplies a need for the average physician, while the other meets the needs of only a few.

The first meeting of the Executive Board of the Woman's Auxiliary was held at St. Louis, October 8, with about forty members of the committee present. Reports were made by the President, Mrs. George H. Hoxie, of Kansas City; by the Chairman of Legislation Committee, Mrs. George Gellhorn; by the Chairman of Organization Committee, Mrs. Willard Bartlett; by the Chairman of Finance Committee, Mrs. M. P. Overholser; by the Chairman of Education Committee, Mrs. E. T. Gibson and others.

TWENTY-FIVE YEARS AGO

Prevention of smallpox was an early accomplishment of medicine, and yet today this most easily controlled disease known to mankind is by no means extinct. This is especially true in the United States where there were 15,000 cases in 1938, an increase from 11,673 cases in 1937. Missouri is in the group of states, the West North Central States, which had the largest total number of cases reported in 1938 and second in number of cases per 100,000 population.

Rear Admiral Ross T. McIntire, the Surgeon General of the Navy, has announced that an examination for commission in the Medical Corps of the Navy and for appointment as intern in the Medical Corps of the Navy will be held at all naval hospitals and at the Naval Medical School, Washington, D. C., beginning November 6.

The opening of the Library and Museum of Medical History of the University of Kansas School of Medicine, Kansas City, Kansas, will be inaugurated by the first of a series of lectures on medical history to which Missouri physicians are invited. On October 9 Dr. Sanford V. Larkey, Baltimore, will speak.

Former students of Dr. Evarts A. Graham, St. Louis, honored him on his twentieth anniversary as professor of surgery at Washington University School of Medicine on October 11 and 12.

TEN YEARS AGO

In the State of Missouri the reported cases of tularemia were as follows: 1947, 87; 1948, 72; 1949, 81; 1950, 52; 1951, 34. These include all of the positive agglutinations, whether new cases or old, as well as proven cases.

Charles A. Worley, M.D., Sweet Springs, was injured in a car wreck in Kansas City in late summer.

At the 19th Annual Convocation of the International College of Surgeons in Chicago, several MoMedics were inducted as Fellows: from St. Louis, Durand Benjamin, M.D., Mary Jane Skeffington, M.D., Alvin Goldfarb, M.D., and William L. Macon, Jr., M.D.; from Kansas City, Hjalmar E. Carlson, M.D., Frederick J. McCoy, M.D., William B. McCunniff, M.D., John H. Mayer, M.D.; and from Dickens, Thomas C. McVeagh, M.D.

MoMedics were much in evidence at the September meeting of the Mississippi Valley Medical Society meeting, held in Chicago. Participating in the meeting, from St. Louis, were James Barrett Brown, M.D., O. P. J. Falk, M.D., Joseph A. Hardy, M.D., Alphonse McMahon, M.D., and Robert Elman, M.D.; from Kansas City, Robert M. Myers, M.D., and from Columbia, Robert L. Jackson, M.D. M.S.M.A. President H. E. Peterson, M.D., St. Joseph, was an honored guest at a banquet held at the Hotel Sherman.

In ceremonies held in front of the clinic he built in 1938, George A. Kelling, M.D., Waverly, was honored for the forty-seven years he had spent in practice there.

Ex-Kansas University football and basketball star, now a Kansas City orthopedist, Harold V. Zuber, M.D., was the subject of Sam Molen's "Sport Profile" over KMBC in that city.

The first rehearsal and meeting of the St. Louis Physicians' Orchestra was held at the home of Walter J. Siebert, M.D., Ladue, in September.

Bothwell Hospital, Sedalia, has installed Tel-EKG equipment. The long distance EKG system is utilizing the facilities of a Kansas City laboratory for interpretations of the tracing.

New Members: Casady, Gilbert N., M.D., Smithville; Fowler, Marvin L., M.D., West Plains; Gary, George, M.D., Marceline; Weed, Randal W., M.D., St. Joseph; Winer, Herbert J., M.D., Kansas City.

At Kansas City General Hospital, the 1953-54 Outstanding Resident award was given to Max Musgrave, M.D., and Outstanding Intern awards were given to Richard Bowles, M.D., Dale Blankenship, M.D., and Bob Collins, M.D. Dr. Musgrave is editor of the General Hospital No. 1 *Medical Bulletin*, and one of the founders of the better-than-average hospital journals which made its appearance early in 1954.

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18th Clinical Convention of the AMA
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New Hill-Burton Projects Await Final Approval

The Missouri Hospital Advisory Council has tentatively approved Hill-Burton allocations totaling $4,774,610. Final approval is still contingent upon approval by the U. S. Surgeon General of a revised hospital plan for Missouri. The 19 hospitals and nursing homes which are recommended for the new Hill-Burton appropriations will receive no money until the Surgeon General's office acts on the project.

The largest single allocation will go to Malcolm Bliss State Hospital in St. Louis. That institution will receive $952,201 for development of psychiatric facilities and installation of 120 additional beds. Control of Malcolm Bliss transferred to the state earlier this year, and the hospital is now being converted into one of the three new intensive treatment centers for Missouri's mental health program.

Other institutions which have been approved as recipients of federal funds are:

St. Mary's Hospital, Jefferson City, $466,000.
St. John's Hospital, Joplin, $427,000.
Hermann Hospital Association, Hermann, $350,000.
Bliss Haven Nursing Home, Mt. Vernon, $300,000.
Lutheran Hospital, St. Louis, $283,949.
Burge-Protestant Hospital, Springfield, $250,000.
Memorial Nursing Home, Jefferson City, $216,608.
Jewish Hospital, St. Louis, $190,921.
Missouri Delta Community Hospital, Sikeston, $124,619.
Memorial Community Hospital, Jefferson City, $106,000.
St. Francis Hospital, Marceline, $87,000.
Audrain County Hospital and Health Center, $67,000.
Jefferson Memorial Hospital, Festus, $44,000.
Aurora City Hospital, $42,643.
Madison County Health Center, Fredericktown, $29,600.
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medical melange

Notes of interest from Here . . . . and There

Can cancer-producing viruses be inherited? New evidence suggests that they may be, says an official of the American Cancer Society. Medical executives of 300 life insurance companies heard James P. Cooney, M.D., vice president for medical affairs of the A.C.S., outline this new theory. Supporting this explanation for the apparent tendency of some cancers to run in families, Dr. Cooney cited studies of the blood of cancer-prone families. He also discussed recent findings of American and Russian scientists, tracing the apparent link between viruses and cancer.

A family of new antibiotics, one undergoing clinical trial in the U. S. and being marketed in some foreign countries, has been described by the Upjohn Company. Lincocin (lincomycin hydrochloride), the drug now in clinical trial in the U. S., and compounds related to it were pictured chemically and biologically by nine company scientists, before the Fourth Interscience Conference on Antimicrobial Agents and Chemotherapy, sponsored by the American Society for Microbiology. Lincocin is made up of an amino acid and sugar fragment, and is active primarily against gram-positive organisms.

Dr. Goldman

Dr. Dickinson

A new medical specialty organization, the American Academy of Facial Plastic and Reconstructive Surgery, Inc., has been formed through the merger of two national associations of otolaryngologists. Entering into the merger were the American Otorhinologic Society for Plastic Surgery, Inc., and the American Society of Facial Plastic Surgery, Inc. The membership of both groups approved the move. The new medical society, expected to include approximately 700 physicians, will consist mainly of otolaryngologists who perform plastic and reconstructive surgery of the head and neck. Elected president of the newly merged Academy is Irving B. Goldman, M.D., New York, and president-elect, John T. Dickinson, M.D., Pittsburgh.

The significance of various low back defects in determining the type of physical work which an employee should be allowed to perform is defined in rather specific terms in a report released by the Industrial Medical Association. The report divides types of work into four classes on the basis of the amount of stress apt to be placed on the low back. Then, listing 33 categories of abnormalities that might be seen in roentgenograms of the low back, the report recommends the job class, or classes, into which a person with each condition might suitably be placed.

An innovation in packaging of pharmaceuticals for single dose control and administration has been launched in the United States by the Wm. S. Merrell division of Richardson-Merrell Inc. Called the *Merrell DAC System*, it will be directed to the nation's hospitals and related institutions. The new system is based on the unit dose concept. Each single unit of drug—either tablet, capsule or injectable—is individually packaged; and each package is identified with the name and potency of the medication, and a manufacturer's name and control number.

(Continued on page 988)

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The Health Insurance Institute has announced publication of a new booklet, YOUR HEALTH AND HEALTH DOLLARS, which was prepared especially for the Institute by Joseph G. Molner, M.D., nationally syndicated newspaper columnist. "The booklet is designed to encourage the general public in the proper use of health insurance and, thereby, help to contain the rising costs of health care," said James R. Williams, Vice President and General Manager of the Institute. In the booklet, Dr. Molner reminds people of the values of both group and individual health insurance and suggests guidelines for using health insurance properly in order to help hold the line on the cost of premiums and medical expenses.

Encouraged by the results of the recently concluded experimental study to evaluate the community pharmacy as a health education center, the American Pharmaceutical Association has launched a program to establish such centers on a national scale. The APhA's new Pharmacy Health Education Center Service consists of the yearly lease of an improved literature display rack, shipments of recommended quantities of different health brochures at regular intervals, in-pharmacy display materials calling attention to the service, and the periodic distribution of suitable publicity for local use. The subscription fee to participating pharmacists has been set at $12 per month for the entire service.

Louis Jacobs, M.D., Chief of the Division of Foreign Quarantine, USPHS, offers this timely advice for Americans planning foreign travel: "If you are going abroad this winter, be vaccinated now against smallpox no matter where you are going, and against yellow fever and cholera if you will be traveling in countries where those diseases are present. And make sure you have your vaccinations recorded on an International Certificates of Vaccination document that you can present to public health officials abroad and when you return to the United States. To be valid for international travel, vaccination certificates must be validated with the stamp of your local health department or with some other stamp approved by the Public Health Service. Immunization against typhoid and partyphoid fevers is recommended for foreign travel. Also, be sure that your immunizations against tetanus, diphtheria, and poliomyelitis are up to date. Ask your family doctor about vaccination against influenza now."

The long-term downward trend of mortality among life insurance policyholders has leveled off in the past few years, according to the 30th annual report of the Committee on Mortality of the Society of Actuaries. The report reviews the experience under standard ordinary insurance issued by 18 large companies. Ordinary insurance is issued in amounts of $1,000 and more. The mortality experienced during 1961-62 was about the same as that in the period 1955-60 for policies issued subject to a medical examination. For standard insurance issued without a medical examination, mortality was somewhat higher in 1961-62 than in 1955-60.

The Arthritis and Rheumatism Foundation, now the sole voluntary health agency in the field of arthritis, has adopted a new name and doubled its goals for dollars and service to meet the needs of what its top officials called "an emergency the public can no longer ignore." The organization will be known as the Arthritis Foundation. Its new national program includes a campaign goal of $10,000,000 for 1965 and a drive to increase the number of Foundation chapters from 78 to 130. "The great majority of the nation's 12,000,000 arthritis sufferers are not receiving today's effective medical treatment which can prevent crippling for three out of four of them," Dr. William S. Clark, the Foundation's newly appointed president declared. Dr. Clark also noted the shortage of specially trained physicians and research scientists in rheumatic diseases. He said the Foundation plans stepped-up training programs in research and patient care and the recruitment of more young men into the field.

pain is almost invariably a presenting symptom in cases of skeletal muscle spasm

In some instances, the pain subsides on relaxation of the muscles in spasm. In others, relaxant therapy alone fails to give adequate relief, and supplementary analgesia (and possibly sedation) are indispensable, as in cases of:

provocative pain, when muscle spasm is triggered by some painful underlying musculoskeletal defect.

residual pain, when relaxation of severe spasticity leaves a degree of myalgia that tends to reinvoke spasm.

severe pain, when the degree of pain is such as to cause persistence of symptoms in spite of relaxant therapy.

emotionally aggravated pain, when anxiety or agitation creates tension that thwarts the efficacy of both relaxant and analgesic medication.

In such cases, Robaxisal and Robaxisal-PH have proven highly effective in assuring decisive and comprehensive relief. The Robaxisal formula—of Robaxin (methocarbamol), the potent muscle relaxant, together with aspirin, the time-tested and proved analgesic—produces higher plasma salicylate levels than equivalent doses of aspirin alone, and serves effectively to control both spasm and pain. Robaxisal-PH's combination of Robaxin (methocarbamol) with the analgesic-sedative ingredients of the Phenaphen formula—including phenobarbital—helps additionally to ease apprehension.

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Robaxisal and Robaxisal-PH are indicated in strains and sprains, painful disorders of the back, "whiplash" injury, myositis, pain and spasm associated with arthritis, torticollis, and headache associated with muscular tension.

Side effects such as lightheadedness, slight drowsiness, dizziness and nausea may occur rarely in patients with intolerance to drugs, but they usually disappear on reduction of dosage.

Contraindicated for patients hypersensitive to any component of the formulations. There are no specific contraindications to methocarbamol, and untoward reactions are not to be expected.

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The Council

A radiologist from Hannibal, Lysle M. Bach, M.D., was named to the Council of Missouri State Medical Association at the Council meeting in St. Louis on September 26 and 27. On recommendation of the MSMA Delegates from the 2nd District, Doctor Bach was selected to succeed Harry L. Greene, M.D., who resigned from the post earlier this year. The new Councilor will serve until the next regular election which will be held during the 1965 Annual Session. Doctor Bach has been a member of MSMA and the Marion-Ralls-Shelby County Medical Society since 1959.

It was noted that the 1965 Annual Session will be held in St. Louis from April 4 to 7. Originally scheduled for Kansas City, the meeting had to be changed when the host hotel there discovered a conflict in convention dates.

Several matters involving questions of relationship between the medical profession and osteopathy were presented to the Council for its consideration. It was agreed that the points at issue were so basic and important that the matter should be decided by the highest authority in the state organization. On motion of Hector W. Benoit, M.D., a resolution was approved asking the MSMA House of Delegates to lay down definite guidelines regarding members speaking before osteopathic organizations, acting as consultants in osteopathic hospitals or schools, or participating in teaching programs in osteopathic institutions.

Steps to improve communication with two para-medical groups were approved by the Council. Special committees were appointed to maintain liaison with the Missouri Pharmaceutical Association and the Hospital Association. Mr. T. R. O'Brien, Executive Secretary, pointed out that closer working relations among all organizations concerned with medicine and health are especially desirable in the area of legislation.

Mr. O'Brien reported that the Kerr-Mills program which was vetoed by the Governor after being approved by the past session of the General Assembly probably will be revised and reintroduced in 1965. The Hospital Association's legislation committee has suggested that a liaison arrangement be established so unified action can be taken in regards to Kerr-Mills or other legislative proposals of interest to both the hospitals and the medical profession.

Another special committee was named to study and make recommendations on handling and disbursing money which will be raised from a $5.00 assessment next year. The assessment was levied on all MSMA members to help defray expenses of those physicians who were named in the Federal Trade Commission action against the Community Blood Bank of Kansas City. The Council also voted to seek financial support from the AMA for this purpose.

James N. Haddock, M.D., St. Louis, presented two resolutions concerning control of standards of health care in non-medical community mental health centers. The proposals, both of which were approved by the Council, would (1) require that any patient admitted to such centers be the direct responsibility of his own physician and that such center or clinic offer psychiatric consultation when requested to do so by the physician, and (2) that all such clinics meet all requirements and regulations set forth by the Executive Committee on Plans for Planning of the state Mental Health Program.

Doctor Haddock called attention to the fact that very few physicians in private practice have made themselves available for service on the sub-committees of the Mental Health Program and only a few county medical societies in the state have appointed mental health committees.

The Council approved the Committee's recommendation for full support of the mental retardation program which has been prepared by George A. Ulett, M.D., Director of the state Division of Mental Diseases. The plan, which concentrates on prevention and early patient care, calls for establishment of from eight to ten small diagnostic and treatment centers around the state. The next session of the General Assembly will be asked to implement the program.

Mr. Raymond McIntyre, Field Secretary, reported that M.U. Medical School graduates recently have established practices in a dozen small communities. He also informed the Council about the work the Sears-Roebuck Foundation is doing in assisting small communities to attract physicians by planning and constructing medical office buildings for their use.

The Council authorized allocation of $125.00 to the Missouri Association of Blood Banks to help finance rural area workshops and training sessions for medical technicians.

(Continued on page 1033)

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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Ellis Fischel: Man, Dream, Reality

In 1937, the General Assembly of the state of Missouri authorized the establishment of a state cancer hospital to provide care and treatment for medically indigent Missourians having cancer or suspicion of cancer. The institution was also charged to conduct "such scientific research as will promote the welfare" of its patients.

The idea and philanthropic force behind the development of this hospital came from Ellis Fischel, M.D., who was interested in cancer surgery and improved care for cancer patients, and who recognized the needs of the indigent patient. He served as chairman of the state's first Cancer Commission, but did not live to see his big dream come to reality. In 1938, while on his way to a meeting of the Commission, Doctor Fischel was killed in an auto accident. The 104-bed hospital in Columbia was completed two years later and was named in his memory, **Ellis Fischel State Cancer Hospital.**

The facility is an administrative unit of the Division of Health, under the supervision of H. M. Hardwicke, M.D., Acting Director of the Division. The Cancer Commission consists of four members, appointed by the Governor, who advise the Division on professional standards within the hospital and pass on appointments of senior medical staff members. The present Commission members are: John J. Modlin, M.D., chairman, Clinical Professor of Surgery at Missouri University School of Medicine; J. G. Probstein, M.D., vice-chairman, Associate Professor of Clinical Surgery at Washington University; W. C. Whitlow, executive secretary, Fulton attorney; and Arch E. Spelman, M.D., Medical Director of the Smithville Community Hospital.

Patients at Ellis Fischel are referred by their own physicians and are declared medically indigent by the presiding judge in the county of their residence. The Hospital staff provides mail or telephone consultation to those physicians who request such service. The staff also transmits to the family of patients and to the referring physician the admitting history, physical examination reports and an outline of the decisions of the tumor board.

Ellis Fischel State Cancer Hospital, Columbia, Mo.

While the patient is in the Hospital, the referring physician receives copies of operative notes from surgery and letters outlining therapeutic plans from the radiotherapy and chemotherapy services. The physician is notified of the discharge of his patient, and later receives the final discharge summary.

When patients are re-examined in the follow-up clinic, letters are sent to the family physician regarding any change in disease status or outpatient treatment. The Hospital staff does not issue prescriptions directly to patients. Rather, enough medication is dispensed to last the patient until he has the opportunity to secure the necessary prescription from his personal physician, who is advised of the suggested medication.

The Hospital engages in a number of educational programs. It is approved by the Council on Medical Education for Group III and IV surgical residency programs and by the American College of Surgeons for a cancer program and tumor registry. Affiliations for education and research are maintained with Jewish Hospital and St. Johns Hospital (St. Louis), St. Louis City Hospital, St. Louis County Hospital, University of Missouri and Washington University.

Each summer Ellis Fischel receives students from various U. S. and Canadian medical schools which are members of the Commissioned Officers Student Training and Extern Program (COSTEP) of the U. S. Public Health Service. Monthly cancer demonstration clinics are conducted for public health and institutional nurses who are interested in the special problems posed by cancer patients.

Meetings for the Consulting Staff are held twice every year. During these sessions, presentations are made on the results of clinical research conducted at the Hospital, papers are presented by guest speakers and panels discuss subjects of interest in cancer detection, research and management.

Although charged to conduct scientific research, the State Cancer Hospital never has been given the funds necessary to implement any extensive research programs. The staff has, however, managed to carry out assessments of the behavior of various cancers and the efficacy of treatment, analyses of follow-up schedules, the reporting of unusual observations, and the development and assay of new clinical approaches to old problems. During the past year the professional staff has published 28 technical articles, submitted an additional 20 for publication and has been involved in 48 clinical research projects.

Since 1940, Ellis Fischel has cared for more than 33,000 patients. The chronicity of cancer necessitates the periodic re-examination of these patients, but at latest report more than half of them were still living. The budget for patient service in the 1963-64 fiscal year was $1,281,082.

As for the future, Milford T. Kubin, M.D., Medical Superintendent of the Hospital, notes that recent reorganization, remodeling and modernization offer the possibility of a 100 per cent increase in patient load. "This doubling could be accomplished," he says, "by the addition of an economical 50-bed domiciliary care and rehabilitation unit to provide quarters for patients requiring protracted hospital stays but needing minimal nursing care."

Doctor Kubin points out that such an increase in beds would practically eliminate the waiting list which has so often delayed patient admission.

Other things are needed. Radiotherapy should have additional space, especially space for a relatively large radium source. And, if the institution is to keep up with the increasing demand for cancer detection examinations, the outpatient clinic will have to be enlarged.

The dream of Ellis Fischel, M.D., has come a long way . . . but, much remains to be done.

A faster, economical and more accurate screening test for syphilis is described in a scientific exhibit by Kenneth A. Borchardt, Ph.D., of Letterman General Hospital, San Francisco. Called the macroscopic latex test, the new screening agent is based upon the fact that antibody-like material in syphilitic blood, reagin, agglutinates the latex particles coated with cardiolipin. The test is conducted by simply adding one drop of the cardiolipin coated antigen to two drops of the patient's blood serum on a glass slide. The two are mixed and the result can be read in two minutes or less. If agglutination occurs, this indicates the probable presence of syphilis, and emphasizes the need for confirmatory testing.

JOHN S. SPRATT, JR., M.D.; RAUL MERCADO, JR., M.D.;
CARLOS PEREZ-MESA, M.D.; *and* COSMO L. HAUN, M.D., *Columbia*

Carcinoma of the Maxillary Antrum: Coordinated Roentgen-Surgical Therapy

THE RESULTS in the management of cancer of the maxillary antrum leave much to be desired, but are not hopeless. Better knowledge of the natural evolution of the disease and sound application of surgical and radiotherapeutic techniques can yield acceptable cure rates, provided that these cancers are discovered before they are so advanced as to make any form of curative treatment impossible.

A review of 68 cases of cancer of the maxillary antrum. Experience from these cases combined with recent observations elsewhere resulted in a change in the therapeutic approach to this type of cancer at Ellis Fischel. Revised therapy consists of: (1) Establishment of a wide open sinusotomy to insure drainage, (2) Homogeneous delivery of at least 5000r in five weeks to 6000r in six weeks as a tumor dose with protection of the contralateral eye, (3) Radical antrectomy in operable cases six weeks after completion of the roentgentherapy, and (4) Prompt treatment of enlarged cervical lymph nodes by a radical neck dissection.

Doctor Spratt is Chief Surgeon at Ellis Fischel State Cancer Hospital. Doctor Mercado is Chief Radiotherapist at the Hospital. Doctor Perez-Mesa is Chief Pathologist. Doctor Haun is a Resident in Radiotherapy.

Up to the 1930's physicians were very pessimistic about this disease, and patients were treated in a half-hearted fashion. As a result, neither cure nor palliation was produced. In 1937, del Regato[5] published the results of treatment of advanced cases by means of radical radiotherapy and showed that a substantial number of 5-year cures could be obtained. Techniques of radiation have improved, but the overall results remain about the same.

Dissatisfaction with the results obtained by either surgery or radiation has stimulated interest in the possible advantages of combining radiation and surgery for various forms of advanced cancer, among them neoplasms of the maxillary antrum. Based on theoretical consideration, as well as experimental findings, preoperative irradiation may accomplish the following:

1. Sterilize or destroy the peripheral portion of the tumor so that surgery can be performed with a greater likelihood of obtaining a free margin around the tumor.
2. Decrease the probability of "seedings" in the wound or disseminating the cancer to distant sites by reducing the ability to implant and multiply.
3. Destroy microscopic foci of metastasis.

This combined approach is quite attractive in the management of maxillary antral cancers where therapeutic failure so frequently is due to uncontrolled progression of the primary cancer rather than to distant metastases. Although the rationale of this approach remains to be proved, the immediate results are encouraging and should be pursued further. Larsson and Martensson[6] have expressed well the prevailing philosophy in the treatment of antral cancers:

> "Some operable cases may be cured by surgery alone and some by radiotherapy alone . . . we believe that the total results are improved by the uniform use of both methods in all operable cases."

The purpose of this report is to review the experience at the Ellis Fischel State Cancer Hospital (EFSCH) with carcinoma of the maxillary antrum and to emphasize these changing concepts toward the treatment of this neoplasm. This cancer occurs relatively infrequently and many have been disturbingly far advanced when first seen at the EFSCH.

Sixty-eight cases presented among 32,207 patients (.047 per cent) between the opening of the hospital in 1940 and 1963. Antral cancer is a disease of the elderly (Table 1) with no peculiar racial or sexual distribution (Table 2).

The cancers were predominantly epidermoid with a scattering of less frequent varieties (Table 3).

TABLE 1

AGE OF PATIENTS

Age Range	Number of Cases
40-49	2
50-59	15
60-69	24
70-79	19
80-89	7
90-99	1
Total	68

TABLE 2

RACE AND SEX

	Caucasian	Negro	Total
Male	36	2	38
Female	26	4	30
Total	62	6	68

TABLE 3

HISTOLOGICAL TYPES

Type of Cancer	Number of Cases
Epidermoid	51
Transitional	1
Adenocarcinoma	1
Lymphoepithelioma (anaplastic)	1
Verrucous	2
Unclassified	12
Total	68

Duration and Extent

From an analysis of the clinical data on these cancers, early diagnosis or the diagnosis of a small primary cancer was a relatively infrequent event. First, in considering the duration of symptoms before admission to EFSCH, many patients had had persistent symptoms for many months before seeking aid or before the physician suspected antral neoplasm (Table 4). The symptoms presented by the patient upon arrival at EFSCH were the symptoms of advanced cancer, 53 of 68 (78 per cent) having a gross tumor of the face (Table 5).

TABLE 4

DURATION OF SYMPTOMS

Months	Number of Cases
0- 3	15
4- 6	23
7-12	21
13-24	5
25-36	4
Total	68

TABLE 5

PRESENTING SYMPTOMS

Symptom	Number of Cases
Tumefaction of Face	53
Pain	45
Nasal Obstruction	32
Nasal Drainage	24
Intraoral Tumor	23
Weight Loss	21
Nasal Bleeding	16
Visual Disturbance	11
Intraoral Ulcer	12
Facial Ulcer	9
Difficulty Chewing	7
Paresthesia of Face	5
Excessive Tearing	5
Dental Disturbance	5
Redness of Face	4
Pain in Eye	2
Others	3

The roentgenograms of all cases were reviewed. All the roentgenographic views requisite to evaluate fully the extent of antral cancer, including Waters, Caldwell, lateral and base views and tomography were not available for many cases. No films were available for two of the cases. However, among the views available only one case failed to show decalcification of one or more antral walls and this case still had partial aeration of the antral cavity. In 8 cases only one antral wall was definitely decalcified. In at least 24 cases (34 per cent) all antral walls showed decalcification.

The thin bony plates and soft tissues about the antrum seemingly offered little resistance to the expansile growth of antral cancers and these cancers grew with a spherical configuration not dissimilar to the growth of spherical metastases growing in pulmonary parenchyma. The antral bony plates probably decalcify first and only later is the periosteum destroyed. This assumption is based on the observation that recalcification and restoration of the bony architecture as viewed roentgenographically occurred frequently subsequent to tumor regression after roentgentherapy. With available roentgenograms the greatest chordal dimension of the antral tumor was distinctly contrasted and measurable for 61 of the 68 cancers (Table 6). This dimension approximates the diameter of a spherical tumor mass. In all but one instance the diameter exceeded the least internal dimension of the adult antrum (2.3 cm.) and this was the only case not presenting decalcification of one or more antral walls.

At least 43 cases of the 66 cases (64 per cent) having roentgenograms on file had osteolytic changes in the floor of the orbit. The vertical dimension of the antrum is only about 2.5 to 3.0 cm. and most tumors filling the antral cavity and exceeding this dimension will be pressing against or invading the floor of the orbit.

The distances between critical cephalic structures are remarkably short. Specifically, the distance from the center of the antral cavity to the middle cranial fossa is only 3.8 cm., and an antral cancer with a diameter of 7.6 cm. or greater may erode into the middle cranial fossa. At least 21 (30 per cent) approached or exceeded this critical dimension and many of the cases with such large cancers were moribund when first seen. Several systems of classification based on point of origin of antral cancers have been proposed. None of these systems was of any use in the EFSCH cases. Perhaps the simplest system of classification would be to classify by tumor size as measured roentgenographically.

DIAGNOSIS

Because of the occult origin of these cancers on the mucous membrane of the antral cavity, the period of silent and asymptomatic growth requisite to fill the antrum, and the relative infrequency of these cancers precluding the feasibility of screening large numbers of asymptomatic persons in the interest of early diagnosis, probably most antral cancers will in the future, as they have in the past, attain a diameter of several centimeters before they are diagnosed. There is, however, little excuse for permitting an antral cancer to exceed 8 cm. in diameter. The pulmonary metastases from one of these antral cancers grew with a doubling time of 59 days.[10] If primary antral cancers grow at about this rate, 8.5 months would be required for growth from a diameter of 3 cm. to one of 8 cm. In actual fact, 21 (30 per cent) of these cancers had produced symptoms for over 9 months before being seen at EFSCH. Only one cancer with a tumor mass larger than 8 cm. in diameter has been controlled and most have been untreatable because of the local extent of the cancers and the moribund state of the hosts. What is really sought with this cancer is *timely* diagnosis and treatment before the cancers become so large as to be untreatable; early diagnosis is more of an ideal and will be achieved occasionally.

TABLE 6

GREATEST CHORDAL DIMENSION OF TUMOR MASS MEASURED ROENTGENOGRAPHICALLY

Greatest Chordal Dimension (cm.)	*Number of Cases*	*Dimensions of Adult Antrum (cm.)*
2- 2.9	3	Width = 2.3
3- 3.9	4	Depth = 3.3
4- 4.9	10	Length = 3.4
5- 5.9	13	
6- 6.9	10	
7- 7.9	12	Center of antrum to middle cranial fossa = 3.8 (a tumor diameter of 7.6 cm. would exceed)
8- 8.9	6	
9- 9.9	1	
10-10.9	2	
Immeasurable	7	
Total	68	

Certainly any patient having unexplained nocturnal pain in the distribution of the fifth nerve, pain in or loosening of the maxillary teeth, persistent unilateral nasal obstruction and drainage, unilateral exophthalmus or strabismus, or persistent trismus from early pterygoid extension, deserves a thorough examination. Intranasal tumor masses require a biopsy. Chronic sinusitis severe enough to necessitate irrigation or drainage should have a biopsy. With the appearance of some of the above symptoms, and definitely with the development of a facial tumor, osteolytic changes can be seen on the roentgenograms. Decalcification and bony destruction can also occur with antral abscess and osteomyelitis but a biopsy is still mandatory.

METASTASES

Metastases were not frequent among these cases in spite of the large size of the primary cancers (Table 7). Only three cases had pulmonary metastases and 13 cases had cervical lymph nodal metastases at the time of admission or developed them within six months. With more effective treatment of the primary cancer, the frequency of late nodal metastases might have risen. In some cases the death was attributable to the metastases, but in the vast majority of the cases was due to the uncontrolled progression of apparently localized cancers. Both Dalley,[4] and Larsson and Martensson[6] have emphasized the efficacy of the standard radical neck dissection for the treatment of cervical lymph node metastases from antral cancer. Dalley reported three dissections for metastases and all three cases survived over five years free of disease. Larsson reported dissections in 14 cases and among those at risk for five or more years 50 per cent were surviving free of disease. One EFSCH case (No. 29992) is free of disease two years after having a radical neck dissection for cervical metastases from an antral cancer. The overall frequency of cervical metastases does not merit prophylactic dissection. However, therapeutic dissections should be employed promptly for operable nodal metastases. If nodal metastases developed during follow-up, they became palpable within six months after treatment of the primary in the EFSCH cases. Patients should be examined monthly during this critical period and should be alerted to contact the physician if cervical adenopathy develops between clinic visits.

TABLE 7

METASTASES

Pulmonary	*Number of Cases*
None seen on thoracic roentgenogram	46
No thoracic roentgenogram	19
Present	3 (4.3%)
Lymph Nodal, Cervical	*Number of Cases*
None detected at time of first examination or in follow-up	56
Present on admission	7 (11.4%)
Not detected on admission, appeared later	5 (7.2%)
Total	68

Pretreatment Sinusotomy for Drainage

The surgical approach for biopsy constitutes the preliminary therapy for antral cancer. These cancers grow in a closed space. The space is contaminated with potentially pathogenic bacteria and the addition of roentgentherapy produces necrosis and aggravates or precipitates a closed space infection. The development of erysipelas is frequent. The response to radiotherapy of any neoplasm is reduced in the presence of secondary infection. Consequently, the antral window for biopsy, whether it be through the canine fossa, the nose or the hard palate must remain wide open for adequate antral drainage during subsequent roentgentherapy; otherwise an antral abscess may select its own path for drainage and may be expected to produce all the secondary septic complications of any undrained antral abscess and to reduce the receptiveness of the tissues to roentgentherapy. Cantril[3] has emphasized particularly well the importance of establishing adequate surgical drainage before roentgentherapy for antral cancer in the following statement:

> "Although antibiotics have proved valuable, the pretreatment establishment of adequate drainage is imperative for the control of inflammatory change. . . . Since 1955, all patients have had unilateral partial resection of the hard palate as it composes the floor of the sinus. With this unfailing dependent drainage, the response to irradiation has been more favorable and the untoward side effects, despite higher dosage, have been diminished. Direct inspection makes possible frequent assessment of radiation reaction and its healing and allows for more certain evaluation on follow-up examination."

Technique of Irradiation

As is to be expected, techniques have changed considerably during the last 25 to 30 years. In the past, radium was widely used in the form of tubes or molds inserted into the antrum through a palatine window. This technique is of limited application because of the usual extension of the tumor into areas that receive low doses from the radium. At the present, external irradiation is used almost exclusively to deliver a high dose to a rather large volume of tissue.

The most frequently used ports are a straight anterior port, a lateral port and occasionally an opposing lateral port. This arrangement, particularly with orthovoltage (250 KV) radiation, gives a very nonhomogeneous distribution with excessively high doses to the superficial tissues if an attempt is made to deliver an adequate dose to the deeper portions of the tumor. With the introduction of more refined techniques (wedge filters) and supervoltage radiation, a more homogeneous dose can be delivered and "hot spots" can be avoided with a coincident decrease in complications. The therapeutic objective is to deliver a tumor dose of 6000r in six weeks. Sometimes treatment has to be fractionated over a greater time period to insure tissue tolerance and a coincident increase in dose in advisable. If radiation is being given as a preoperative measure the dose may be reduced to 5000r in five weeks.

One of the more serious problems encountered is protection of the eyes. Radiation induced cataracts are frequent even with rather small doses (400r). Individual susceptibility varies among patients receiving the same dose.[8] A more serious problem is acute or chronic injury to the cornea or uvea, which will occur with higher doses.[7, 9] Whenever possible the eyes should be shielded. In a great majority of cases, however, there is neoplastic extension to the orbit necessitating the irradiation of the eye at least for part of the duration of the treatment. According to Baclesse[1] doses up to 2500r will be tolerated with no danger, other than the likelihood of developing a late cataract. Of extreme importance is the planning of therapy in such a way that the contralateral eye is protected throughout the entire treatment. When a post-treatment orbital exenteration and antrectomy is planned, or when orbital invasion is known to exist, protection of the eye on the side of the tumor is not necessary and may be contraindicated because of the decreased dose to orbital extensions of the cancers.

Dalley reported nine orbital exenterations and five enucleations among 77 patients, none of which had to be performed as a consequence of radiation effect. Among the same patients there were 10 cases of homolateral cataracts and six cases with bilateral cataracts. In our own material, 33 patients received radiation to the eye and 10 of them developed significant ophthalmic changes, probably secondary to radiation. Among 22 patients in whom the eye was protected, only four had similar changes.

The other late complication is osteonecrosis, which usually does not occur until at least a year after treatment. This is to be expected, considering that so many of these patients have extensive bone involvement or destruction before initiation of treatment. Some of these changes are limited in extent and can be handled by surgical removal of sequestra. The incidence of this complication again varies in the many reported series. Dalley reports 12 cases while Larsson had 16 cases out of a large but undetermined series. Cantril reports eight instances of osteonecrosis among 47 cases. The possibility of this complication is reduced by controlling antral infections by pretreatment drainage and is eliminated when roentgentherapy is succeeded by antrectomy.

Soft tissue necrosis, although less significant, can also occur in a fair percentage of cases.

These complications are distressing both to the patient and the radiotherapist. In spite of all efforts it would be impossible to eliminate all of them completely—to a certain degree they have to be accepted as the inevitable consequences of aggressive therapy for aggressive cancers.

SURGICAL TECHNIQUE

All cases operated upon at the EFSCH have been sufficiently advanced as to necessitate the performance of a total antrectomy and orbital exenteration. Transoral endotracheal anesthesia is employed. An oropharyngeal pack soaked in aqueous zephiran is placed to prevent operative drainage from entering the trachea.

The palpebral margins are approximated with sutures and a standard Weber-Ferguson flap is raised. Because of the abundant vascular anastomoses no advantage exists from the preliminary ligation of the external carotid artery, as has been recommended by some. Invaded skin is included in the resection. When the tumor is suspected of having extended posteriorly or into the subtemporal fossa, the Weber-Ferguson flap can be extended posteriorly to the tragus as recommended by Barbosa.[2] Such extensions have been considered until very recently as criteria of inoperability. Barbosa has shown that many pterygoid or subtemporal fossa extensions can be cured by resection. He describes the ligation of the internal maxillary artery at the posterior margin of the ascending ramus of the mandible and the inclusion of the ascending ramus of the mandible and the entire zygoma and all the musculature of the subtemporal and pterygoid fossa en bloc with a radical antrectomy and orbital exenteration.

With palatine or alveolar involvement by cancer, a midline resection of the palate is required. In the absence of involvement, the mucosa of the hard palate and all the soft palate can be saved to reconstruct the roof of the mouth. If sacrifice of the soft tissue is required, a dental prosthesis can fill this defect very well. In all instances the bony hard palate must be included at this constitutes the floor of the antrum.

No case sufficiently early as to permit the salvation of the orbit has been operated on at EFSCH. The orbit is enucleated by subcutaneous dissection and preservation of the palpebral skin and the subperiosteal stripping of all orbital contents away from the roof. The medial wall containing the ethmoid and sphenoid air cells is included. The ophthalmic vessels and the optic nerve are ligated posteriorly with heavy catgut.

After these steps the antrum remains attached only posteriorly to the pterygoid plate from which it can be separated with a bone cutting forceps. When posterior extension is suspected the Barbosa approach is preferable with inclusion of the pterygoid plate with the antrum by transecting it at its attachment to the skull. All mucosa of the nasal septum is stripped away to prevent the later development of painful encrustations. Any remaining mucosa of the ethmoid and sphenoid sinuses is stripped away.

The defect and posterior surface of the skin flap are lined with a split thickness skin graft. The cavity is packed and the flap is closed. The patient is fed through a feeding tube in the early convalescent period. Diet becomes normal only when the roof of the buccal cavity is restored with a dental prosthesis.

RESULTS

The similarity in the results obtained in different treatment centers is striking (Table 8).

Although different series are not truly comparable, it would seem proper to draw certain conclusions:

1. The more advanced cases are usually treated exclusively by irradiation. Although these are unfavorable cases, a substantial cure rate justifies radical irradiation for these cases (Table 8).
2. Palliative doses of radiation are of no real value. At EFSCH patients receiving low doses of radiation (less than 5000r) practically all died within one year without appreciable relief of symptoms. Among those receiving high or "radical" doses, longterm cures were obtained; those who were not permanently cured had good palliation and prolongation of life. Radical radiation is indicated for locally advanced and inoperable tumors (Table 9).
3. Some small tumors (operable cases) can be treated successfully by radical irradiation. The end results might be just as good if these tumors were treated primarily by surgery. Unfortunately, the percentage of cases that fall in this sub-group is so small the over-all results would not be materially altered. Furthermore, local recrudescence after roentgentherapy alone is frequent though some times late in appearing and coordinated roentgen-surgical therapy seemingly offers the best chance for local control.
4. Combined radiation and surgery yield very gratifying results in a group of patients that ordinarily would be considered inoperable. To what extent this approach can be extended to include a larger group of fairly advanced cancers remains to be seen.
5. Radiation and surgery are effective tools for the management and cure of antral cancer. Close cooperation between surgeon and therapist is essential to choose those cases likely to benefit from combined therapy.

At EFSCH therapy has varied over the 24-year period with changing therapeutic ideas and different therapeutic modalities. Thirteen patients received no treatment and 19 received only palliative radiotherapy for reasons including refusal of treatment, presence of pulmonary or inoperable cervical metastases, extreme age, the critical or moribund condition and intolerance to roentgentherapy. All 31 of these patients were dead within one year. The accumulative five year survival for all 68 cases was 12.3 per cent. For the 37 cases receiving complete therapy the accumulative survival was 20.3 per cent.

However, as mentioned previously this therapy was diverse. Roentgen dosage was an important determinant of survival (Table 9). The

TABLE 8

FIVE YEAR SURVIVAL

Treatment	*Royal Marsden*[4]		*Radiumhemmet*[6]	
X-ray alone	4/31	12%	17/142	12%
Combined-x-ray and surgery	14/53	40%	51/114	45%
No therapy	0/1	0%	0/38	0%
Total	18/67	27%	62/294	23%

TABLE 9

RELATION OF TUMER DOSE OF ROENTGENTHERAPY TO HOST SURVIVAL

Estimated Tumor Dose (Roentgens)	*Number of Cases*	*Accumulative Five Year Survival (%)*
<4000	15	0*
4001-5000	12	8.5
5001-6000	12	26.2**
6001-7000	9	35
>7000	5	40.2
	—	——
Total	53	

* All cases receiving less than 4000r were dead within one year without palliation.

** All therapy in excess of 5000r was given over 5-8 weeks.

TABLE 10

RESULTS OF THERAPY FOR CANCER OF THE MAXILLARY ANTRUM*

Case Number	*Sex*	*Age*	*Size and Extent of Primary*	*Therapeutic Determinants*	*Pretreatment Drainage*	*Roentgen Therapy Cobalt 60*	*Surgical Resection*	*Metastases*	*Status at Last Contact*	*Duration of Survival Since 1st Visit (Mos.)*
29992	M	72	4.5 cm. destruction lateral and anterior walls	Planned therapy	Caldwell-Luc	5548r in 46 days	Radical antrectomy with orbital exenteration**	Yes with radical neck dissection	Alive and well	26
30305	F	59	5 cm. destruction lateral, nasal and orbital	Planned therapy	Caldwell-Luc	5550r in 39 days	Radical maxillectomy with orbital exenteration**	No	Alive and well	23
31214	M	68	5 cm. lateral, zygomatic, extension into subtemporal fossa	Planned therapy	Caldwell-Luc	5200r in 19 days	Barbosa** procedure (see text)	No	Alive and well	14
31261	M	75	8 cm. destruction all walls	Cachectic and moribund. Could not tolerate therapy	Transpalatine sinusotomy	None	None	No	Dead with cancer in the hospital	1
31916	F	62	5 cm. superior and medial extension with erosion of sella	Inoperable	Caldwell-Luc	5500r in 47 days	None	No	Alive and well	7

* Results since August, 1961 on patients treated primarily at Ellis Fischel State Cancer Hospital.

** Resections were performed about 6 weeks after completion of radiotherapy. Tumor had regressed grossly in two antra, but was present on microscopic examination in all three.

tolerance to high dosages depends upon surgical assistance before treatment in the establishment of adequate drainage for the control of secondary infection of the decompression of the antral tumor. The sterilization by roentgentherapy is often incomplete and local recurrence develops. Complete local disappearance of the tumor occurred in 19 instances but three had early pretreatment antrectomies. Local regrowth developed in 11, leaving only five cases at present with local control by roentgentherapy alone. In one case the recurrence was not evident until the 6th post-treatment year.

Present Treatment

Considering the observations of Dalley, Larsson and Cantril, and the past experience at EFSCH, a four-part therapeutic plan was introduced in 1961 including: 1) permanent antral sinusotomy for drainage and antibiotics for infection, 2) full course of roentgentherapy consisting of 5000-6000r tumor dose given within a six-week period, 3) six weeks after completion of roentgentherapy a radical antrectomy and orbital exenteration, and 4) radical neck dissection for operable cervical metastases. A more conservative surgical procedure might be employed for smaller tumors not involving the roof of the antrum. For more advanced tumors, particularly those extending posteriorly or into the subtemporal fossa the procedure described by Barbosa[2] is employed. For far advanced and inoperable cancers, surgical drainage and radical irradiation alone are to be employed. Since the revised approach to antral cancer was adopted, five cases have presented for primary treatment and the results are listed in Table 10. The initial results have been most gratifying.

ACKNOWLEDGEMENT

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"Just One in a Crowd," a new filmstrip series for diabetes patient education, has just been released by the Public Health Service, U. S. Department of Health, Education, and Welfare. It is designed to help educate the 2,000,000 known diabetics and the 200,000 new diabetics that are being diagnosed every year. Each of these persons must be taught, under the direction of his physician, how to manage his disease. This six-part series presents basic information on diabetes in a colorful and easily understood fashion. It contains an introductory lesson on diabetes, itself, two lessons on diet, lessons on physical health and medication, and a concluding lesson that reviews the entire course. Each fifteen-minute session is complete and can be used separately, followed by a question and answer period. The series comes in a set, with an instructor's manual, in slide or filmstrip format with the audio portion available on both tape and record. It is filmed in color on 35 mm. frames and can be used in standard slide projectors. The filmstrip may be borrowed, free of charge, from the Public Health Service Audiovisual Facility, Atlanta, Georgia.

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Pernicious Anemia With Free Gastric Acid

A case of hyperchromic macrocytic anemia with a megaloblastic marrow responding to vitamin B_{12} injection is reported. A twice-performed Schilling test demonstrated the patient's inability to absorb oral vitamin B_{12} except in the presence of exogenous oral intrinsic factor. The presence of free acid in the gastric analysis in such a case is a very rare occurrence.

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HISTORICAL BACKGROUND

ADDISONIAN PERNICIOUS ANEMIA is a disease attributable to vitamin B_{12} deficiency which results from a lack of Castle's intrinsic factor in the stomach. Achlorhydria has been considered a *sine qua non* of the disease. Haden[1] has reviewed in detail the history of the development of our understanding of pernicious anemia. The first description of pernicious anemia appeared early in the Ninteenth Century, and Addison described the disease more completely in 1855. In 1924 Levine[2] found 104 of 105 cases of pernicious anemia to exhibit persistent achlorhydria. Castle[3] suggested the role of achylia gastrica in the pathogenesis in 1931. In 1903 Bloch[4] probably was the first to suggest that the pernicious anemia syndrome could occur in a patient with free gastric acidity. Levine[2] reported a case with gastric acidity in 1924, Hartfall[5] in 1933, and Finney[6] in 1939. However, in 1944 Askey[7] critically reviewed and rejected all of the previously reported cases of pernicious anemia with free gastric acidity. The approximate number of these cases was 47, and in each case there was failure to fulfill certain basic diagnostic criteria.

DIAGNOSTIC CRITERIA

Askey[7] listed the following characteristics prerequisite to a diagnosis of pernicious anemia, in addition to achlorhydria:

1. **macrocytic hyperchromic anemia**
2. **subacute combined degeneration of the cord**
3. **glossitis**
4. **reduction of intrinsic factor**
5. **loss of specific liver principles.**

The following diseases should be ruled out:

1. **gastric neoplasm**
2. **pregnancy**
3. **sprue**
4. **avitaminosis**
5. **intestinal stricture or anastomosis**
6. **gastrectomy**

Although he studied the disease in the period before the Schilling[8] test was described in 1953, Askey concluded that before pernicious anemia with free acid can be reported, the patient study should include gastrointestional films and liver function tests. Twenty years ago he stated that ultimate proof of pernicious anemia lies in satisfying these three qualifications: 1. rule out other causes, 2. biologic assay to show lack of intrinsic factor, 3. response to desiccated hog stomach. To this list has been added the Schilling[8, 9] radioisotope technique.

A search of the literature has produced two case reports[10, 11] of pernicious anemia with free gastric acidity using more modern techniques and diagnostic criteria. The case report below is offered as another possible example of this rare syndrome.

CASE REPORT

A 49 year old white farmer was admitted to the Ellis Fischel State Cancer Hospital in September 1963 with a six month history of abdominal pain, anorexia, weight loss of 30 pounds, and severe anemia. The referral note suggested that there was x-ray evidence of widening of the duodenal loop, possibly due to a pancreatic tumor. He produced little additional historical information, and there was no history of melena. Physical examination revealed a weak pale man with no abdominal mass, no jaundice, and no lymphadenomegaly.

He was admitted to the surgical service where x-rays of the chest, upper and lower gastrointestinal tract and gall bladder revealed no evidence of disease. A repeat barium enema was negative, and a lateral film of the skull revealed no evidence of bone disease.

Admitting laboratory studies reported a hemoglobin of 7 gm., hematocrit 21 per cent, WBC 2050, platelets "decreased," and a differential WBC of 56 segmented neutrophils, 4 eosinophils, and 40 lymphocytes. The blood urea nitrogen 14 mgm., fasting blood sugar 95 mgm.; alkaline phosphatase, serum-glutamic-oxalic transaminase and serum-glutamic-pyruvic transaminase were within normal limits. Total protein 6.6 gm. of which 4.9 was albumin and 1.7 globulin. The bromosulfalein was 9 per cent retained in 45 minutes, the thymol turbidity 0.8 units; prothrombin concentration was 78 per cent, patient 15.5 seconds, control 13.5 seconds; C.C. flocc. 24 hour negative, 48 hour 1 plus; three stools for occult blood were negative; direct bilirubin 0.5 mgm., total 0.54 mgm. The follow-up blood count four days later revealed a fall in hemoglobin to 5 gm., attributed to improved hydration. The hematocrit was 17, RBC 1.48 million, reticulocytes 0.7 per cent. Because of the low level of hemoglobin, he was given four transfusions of O-positive blood in order to prevent risking his life during the diagnostic work-up.

A gastric analysis revealed a volume of 184 ml. on a 12 hour overnight specimen with 20 degrees of free acid, combined acid 40, total 60. Free acidity determinations were performed with Töpfer's reagent and continued titration to total acidity was performed with phenolphathalein. A repeat gastric analysis was recorded as 60 ml. volume, 9 degrees free acid, 9 degrees combined, 18 degrees total. At the second admission, another 90 cc. overnight gastric specimen had 22 degrees free acid, combined 8, total 30 degrees.

A hematologic consultation revealed additional data. The patient recalled that four years before admission his arms had become weak and he was unable to keep up with his farm work. He noted "tingling" paresthesias in the legs which he recalled to be present since high school days. His tongue, although appearing to have normal papillae, had been sore for one year and caused a sensation of being "cracked" on the edge. Tingling paresthesias of the arms and legs associated with weakness had necessitated his holding to the wall or to a rail to assist in walking for several months before admission. During the last month he was so weak he stayed in bed. There had been no change in bladder or bowel function. The only positive neurologic findings were subjective sensory changes and motor weakness in all extremities. There was no objective sensory loss nor reflex derangements; the biceps reflex was one plus and the patellar was two plus bilaterally.

A bone marrow examination revealed maturation arrest in the rubricytic series (fig. 1) in the manner of pernicious anemia, although this appeared to be a conflict with the repeated finding of free acid on gastric analysis. Peripheral blood smears taken during work-up for anemia showed normal erythrocytes from donors, and hyperchromic macrocytes belonging to the patient, and hypersegmented neutrophils. (fig. 2)

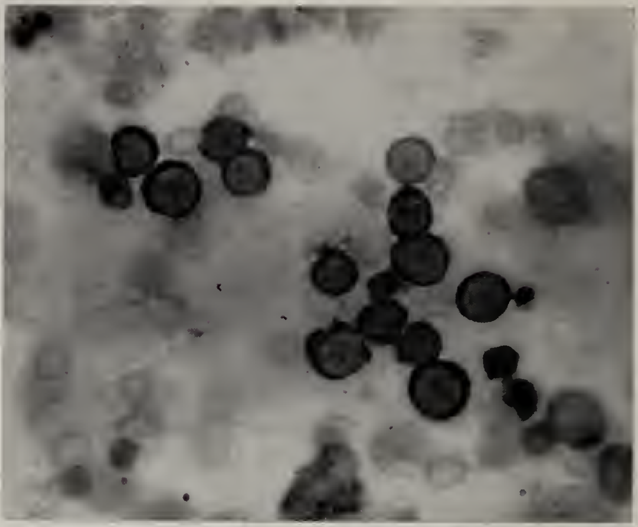

Fig. 1. Bone marrow examination.

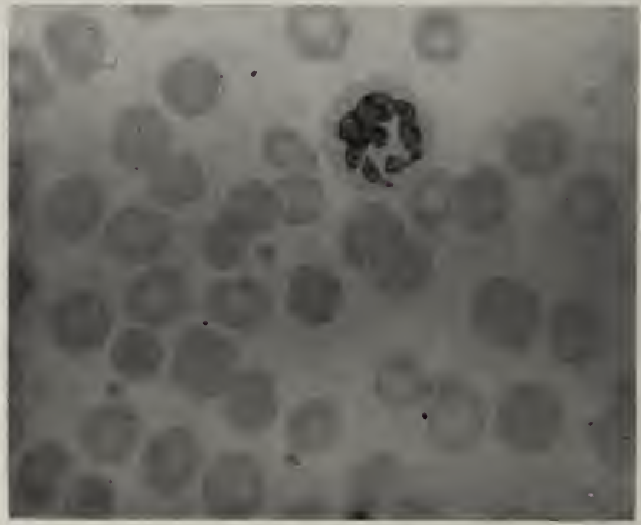

Fig. 2. Examination of peripheral blood smear.

A Schilling test was performed on October 4, 1963, the results of which are shown in figure 3. The reticulocyte response incidence to the administration of 1 mgm. of vitamin B_{12} in the Schilling test on September 30, is shown in figure 4, and table 1.

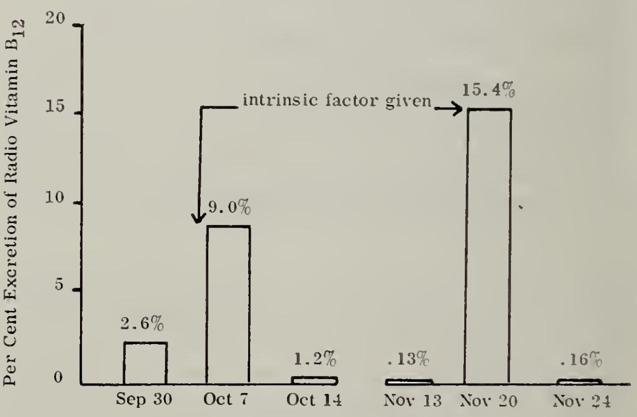

Fig. 3. Schilling test results.

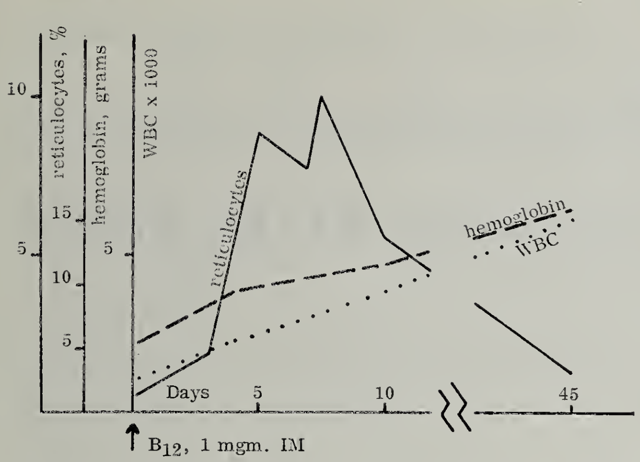

Fig. 4. Reticulocyte response accompanying administration of vitamin B_{12}.

TABLE 1

HEMATOLOGIC RESPONSE TO VITAMIN B_{12}

	% Retic.	*HGB*	*Hematocrit*	*WBC*	*RBC*
9-17	0.7	5.0	17.0	2,050	1,480,000
9-30	B_{12}, 1 mgm. IM				
9-30	0.4	5.6		1,080	
10-2	1.3				
10-3	1.8				
10-4		9.8	30.5	2,225	
10-5	8.8				
10-7	7.7				
10-8	10.0				
10-10	5.6	11.8	36.0	3,825	
11-13	1.2	16.0	48.0	5,000	

DISCUSSION

Megaloblastic marrow with a hyperchromic macrocytic anemia was suggestive of pernicious anemia, and the peripheral nerve complaints tended to corroborate this impression although evidence for severe subacute combined degeneration of the cord was not found. The presence of free gastric acid on three different fasting specimens presented a diagnostic enigma. A complete cycle of Schilling tests were performed on two occasions. Each test consisted of the administration of oral radioactive B_{12}, 0.5 mcg. and 0.5 microcurie, with 1 mgm. "cold" vitamin B_{12} intramuscularly, with determination of the percentage of excretion of the radioactive dose in the following 24 hour urine specimen. This was repeated with an oral intrinsic factor concentrate capsule (Squibb), after a period of seven days. An additional test was performed again without intrinsic factor after approximately seven days.

The patient's inability to absorb normal amounts of vitamin B_{12} orally is demonstrated by the Schilling test results in figure 3, and it is apparent that oral intrinsic factor clearly elevated the absorption and excretion of a radiovitamin B_{12} to normal level. Concomitant with the rise in reticulocytes was the increase in hemoglobin to a normal level of 16 gm., and the leukocytes reached a normal level. There was complete subsiding of the paresthesias in the arms and legs and the patient's weight increased from the 152 pounds to 198 pounds at the time of the second admission, two months later, a gain of 46 pounds. The second admission was for the purpose of a repeat gastric analysis, and for the second cycle of Schilling tests.

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WILLIAM L. DONEGAN, M.D., *Columbia*

An Evaluation of Radical Mastectomy Following Simple Mastectomy for Carcinoma of the Breast

Dr. Donegan, Staff Surgeon at Ellis Fischel and Instructor in Surgery at Washington University School of Medicine in St. Louis, reviews a group of 24 patients treated with radical mastectomy following simple mastectomy for carcinoma of the breast. Five and ten year survival rates of these patients are not significantly different from those of patients initially treated with radical mastectomy at the same institution.

THE PURPOSE of this paper is to evaluate the results of radical mastectomy in patients previously treated with simple mastectomy for carcinoma of the breast.

In 1949 Lockhart and Ackerman reviewed the experience at the Ellis Fischel State Cancer Hospital with patients referred for further treatment following local excision or simple mastectomy for breast carcinoma.[1] Of 22 cases with previous simple mastectomy six, without signs of inoperability, were treated with radical mastectomy with seemingly poor results. Only two were alive at the time of the report.

Slaughter and Peterson, in discussing 42 patients treated with simple mastectomy for various diseases, mentioned six having carcinoma. In these six cases simple mastectomy was converted to radical, but no follow-up is given.[2]

Radical mastectomy is standard therapy for operable breast carcinoma at Ellis Fischel, and the conversion of simple mastectomy, performed elsewhere for operable carcinoma, to radical mastectomy has been practiced. It was believed that a sufficient number of cases had accumulated to justify re-evaluation of the results.

MATERIALS AND METHODS

From 1940 through June 1958, 29 patients previously treated with simple mastectomy for carcinoma of the breast were converted to radical. All simple mastectomies, with one exception, had been performed prior to referral. The clinical stage of the disease at the time of the original operation was not always known. One simple mastectomy was performed at this institution for intraductal papillomatosis. This was followed in 25 days by a radical mastectomy after an unsuspected carcinoma was discovered in the specimen. The pathological material from the simple mastectomy was obtained and reviewed on all cases to verify the diagnosis prior to further surgery.

In each case the pectoralis muscles in whole or in part were present, as were the axillary contents. Little or no breast tissue remained. Patients selected for surgery had no evidence of distant disease on physical examination or chest X-ray, and no evidence of regional lymph node involvement other than ipsilateral axillary node enlargement. Local recurrence of disease on the chest wall within the boundaries of the previous dissection did not contraindicate surgery.

Radical mastectomy in each case was performed by removing the axillary contents in continuity with the remaining pectoralis muscles and a large area of skin of the chest wall, including the existing scar. The intention was not to enter the planes of the previous dissection. Due to the large area of skin removed from the chest wall it was necessary to apply split thickness skin grafts in seventeen cases. There was no operative mortality. Three patients required postoperative application of stamp grafts.

Four patients had received supplemental treatment in addition to simple mastectomy prior to referral. Two of the former had received postoperative radiotherapy. A third patient received simple mastectomy plus postoperative Testosterone injections, and the fourth received stilbestrol for local recurrence. One of the two treated with radiotherapy died 13 months postoperatively of persistent carcinoma, and the second died after 66 months, cause unknown. The third patient has survived 64 months, but has locally recurrent disease. The last patient died of carcinoma 32 months following surgery. Because of the complicating adjunctive treatment, these four patients were excluded from further consideration in this study. A fifth patient was also excluded, because the original pathological material had been lost and no histologic diagno-

TABLE 1—SUMMARY OF DATA

24 PATIENTS TREATED WITH RADICAL MASTECTOMY AFTER SIMPLE MASTECTOMY

Case No.	*Age*	*Interval Between Operations (Months)*	*Local Recurrence Prior to Radical Mastectomy*	*Axillary Adenopathy Prior to Radical Mastectomy*	*Histological Involvement of Axillary Nodes*	*Local Recurrence After Radical Mastectomy*	*Distant Recurrence After Radical Mastectomy*	*Survival After Radical Mastectomy (Months)*	*Condition*
51-15299	49	2	No	2 cm. firm mobile node	1/40	No	No	158	Living
44-6464	46	1	No	No	0	No	No	147	Dead
47-10546	45	5	No	5 × 6 cm., painful axillary mass	6/22	Yes (axilla)	Yes	8	Dead
51-14902	43	2	No	No	0	No	No	44	Dead
51-15189	25	1	No	1 cm. firm movable node	0	No	No	148	Living
52-16483	45	5	No	1 cm. movable node	1/21	No	No	140	Living
44-6329	44	2	No	1 cm. firm movable node	0	No	No	240	Living
53-17476	50	1	No	No	1/20	No	Yes	10	Dead
46-9376	55	4	No	No	3/33	No	Yes	11	Dead
51-16021	62	2	No	1 cm. node	0	No	No	149	Living
47-9702	40	1	No	No	0	No	No	197	Living
49-12084	65	48	Yes	No	0	Yes (med. flap)	Yes	32	Dead
47-10100	46	8	Yes	3 hard nodes, largest 2.5 cm. diameter	42/44	No	(probable)	3	Dead
53-17505	52	24	Yes	No	9/14	Yes (diffuse)	Yes	64	Dead
56-22191	52	24	No	1 cm. hard mobile node	3/29	Yes (diffuse)	Yes	70	Dead
58-25129	52	24	No	No	2/8	No	Yes	63	Dead
42-4379	34	26	No	3 × 4 cm. mass firm movable	2/22	No	Yes	13	Dead
43-5917	51	2	No	No	7/10	No	(probable)	4	Dead
48-11793	59	28	No	1 cm. fixed node	Yes (total)	No	(probable)	4	Dead
44-6624	52	3	No	No	1/7	No	Yes	59	Dead
46-8327	52	63	Yes	No	3/8	Yes (graft)	Yes	39	Dead
58-24932	56	3	No	No	0	Yes (graft)	No	72	Living
56-22551	40	1	No	No	0	No	No	92	Living
51-15672	59	2	No	1 × 2 cm. firm, mobile node	0	No	No	145	Dead

sis could be established. Axillary lymph nodes removed at the time of radical mastectomy were found to be histologically normal. This patient subsequently lived 13 years and eight months and died without evidence of carcinoma.

A total of 24 patients remained for evaluation, all of whom were followed for a minimum of five years subsequent to radical mastectomy.

RESULTS

Of the 24 cases, 23 were female and one a male. Twelve of the former were pre-menopausal and ten were post-menopausal. Definite information in this regard was lacking in two cases although their ages of 55 and 50 years probably indicate a post-menopausal status. Ages ranged from 25 to 66 years, with a mean of 49.5 years. The right breast was involved in thirteen cases and the left in eleven. Further data is tabulated on Table 1.

A life table (Table 2) for the entire group following radical mastectomy indicates a five year survival of 54.2 per cent and a ten year survival of 37.0 per cent. This is gross survival, and no attempt is made to distinguish patients surviving with recurrent disease.

Table 2

LIFE TABLE FOLLOWING RADICAL MASTECTOMY FOR ENTIRE GROUP OF TWENTY-FOUR PATIENTS WITH PRIOR SIMPLE MASTECTOMY

Interval (Years)	*At Risk*	*Dead*	*Withdrawn Alive*	*Interval Survival*	*Cumulative Survival*
0-1	24	6	0	75.0%	75.0%
1-2	18	1	0	94.4%	70.8%
2-3	17	1	0	94.1%	66.6%
3-4	16	2	0	87.5%	58.3%
4-5	14	1	0	92.8%	54.2%
5-6	13	3	1	76.9%	41.7%
6-7	9	0	0	100.0%	37.0%
7-8	9	1	0	88.8%	37.0%
8-9	8	0	0	100.0%	37.0%
9-10	8	0	1	100.0%	37.0%

At the time of admission four patients had evidence of locally recurrent disease. Three of the four (75 per cent) developed local recurrence following radical mastectomy, which in each was the first manifestation of persistent disease. By contrast only three (15 per cent) of the remaining 20 patients developed this grave sign. Three of the four patients admitted with local recurrence died of persistent carcinoma within five years of radical mastectomy. The patient surviving five years died at 64 months, also with persistent disease. In all, six patients (25 per cent) developed local recurrence following radical mastectomy, all within five years.

The delay from simple mastectomy until radical mastectomy ranged from 25 days to 63 months, the average time being 11.5 months.

Figure 1 correlates the period of delay with survival following radical mastectomy. The cases with local recurrence after simple mastectomy are represented by circled points. The majority of patients (69.2 per cent) surviving for five years or longer had a period of delay less than five months. None of the four patients with a delay exceeding 24 months survived five years.

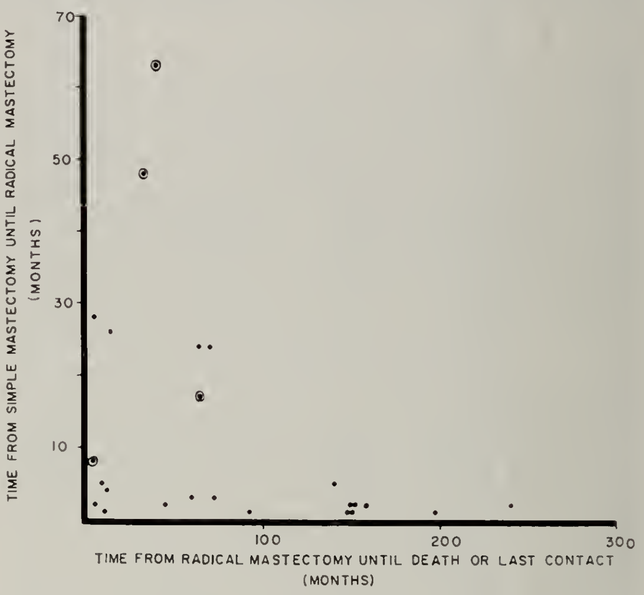

Fig. 1

Figure 2 is derived from Figure 1 and shows the five year survival curve for the aggregate of patients treated with radical mastectomy within increasing periods of time following simple mastectomy. An indirect correlation between the two factors is evident. Five year survival rapidly increases as the period of delay diminishes from ten months. For periods exceeding ten months the five year survival shows a gradual decline.

Axillary lymph nodes were involved in 14 (58.3 per cent) of the 24 patients. This included three of the four patients with local recurrence. When axillary lymph nodes were histologically involved five year survival was 35.7 per cent, and when not involved, 80.0 per cent. These figures are comparable with those generally reported in the literature when radical mastectomy is employed as the initial treatment.

Lymph nodes were palpable on clinical ex-

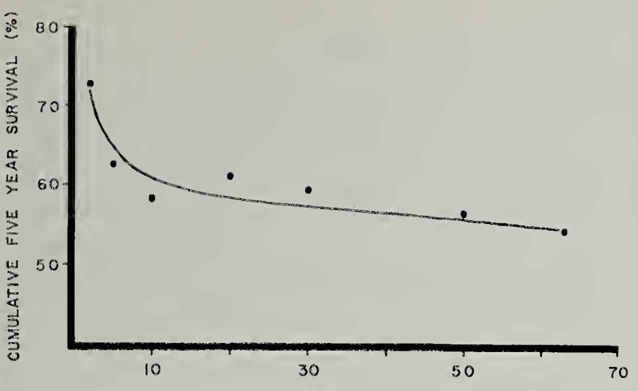

Fig. 2

amination in 11 of the 24, of whom seven (63.6 per cent) proved to have histological involvement. Of the 13 patients without palpable nodes seven (53.8 per cent) had histological involvement.

A life table for patients with palpable ipsilateral axillary lymph nodes shows a five year survival of 63.6 per cent (Table 3), a survival not inferior to that of the entire group. When axillary lymph nodes exceeded 2 cm. in diameter, or were fixed, they almost always contained tumor (five out of six), and the five year survival fell to 33.3 per cent.

As shown in Figure 3 there were relatively fewer patients with involved axillary nodes in the group with a short period of delay between operations than in that with a longer period. Axillary nodes were involved in 35.7 per cent of cases when the delay was less than five months, whereas 90 per cent had involved nodes in the group with a delay of five months or more.

TABLE 3

LIFE TABLE FOLLOWING RADICAL MASTECTOMY FOR ELEVEN PATIENTS WITH PRIOR SIMPLE MASTECTOMY PRESENTING WITH PALPABLE AXILLARY LYMPH NODES

Interval (Years)	*At Risk*	*Dead*	*Withdrawn Alive*	*Interval Survival*	*Cumulative Survival*
0-1	11	3	0	72.7%	72.7%
1-2	8	1	0	87.5%	63.6%
2-3	7	0	0	100.0%	63.6%
3-4	7	0	0	100.0%	63.6%
4-5	7	0	0	100.0%	63.6%
5-6	7	1	0	85.7%	54.5%
6-7	6	0	0	100.0%	54.5%
7-8	6	0	0	100.0%	54.5%
8-9	6	0	0	100.0%	54.5%
9-10	6	0	0	100.0%	54.5%

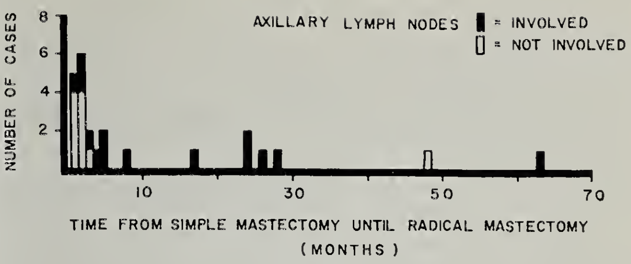

Fig. 3

DISCUSSION

Both the five year survival rate of 54.2 per cent and the ten year rate of 37.0 per cent in this group of patients compare favorably with those of other patients treated initially with radical mastectomy for unilateral breast carcinoma at Ellis Fischel (53.0 per cent and 35.6 per cent respectively) and with those reported by most others in the literature (Table 4). In general, the preceding simple mastectomy appeared to have no deleterious effect upon survival.

TABLE 4

LIFE TABLE FOR ALL PATIENTS (704) TREATED FOR CURE OF UNILATERAL BREAST CARCINOMA AT ELLIS FISCHEL STATE CANCER HOSPITAL BETWEEN 1940 AND JUNE 1958

Interval (Years)	*At Risk*	*Dead*	*Withdrawn Alive*	*Interval Survival*	*Cumulative Survival*
0-1	704	60	0	91.5%	91.5%
1-2	644	93	0	85.6%	78.3%
2-3	551	79	0	85.7%	67.1%
3-4	472	56	0	88.1%	59.1%
4-5	416	43	0	89.7%	53.0%
5-6	371	34	29	90.8%	48.1%
6-7	308	32	27	89.6%	43.1%
7-8	249	20	18	92.0%	39.7%
8-9	213	9	15	95.8%	38.0%
9-10	189	12	23	93.7%	35.6%

Although this series is small and no firm conclusions are justified, certain factors deserve consideration. In the four patients observed, development of local recurrence after simple mastectomy appeared to be associated with an increased incidence of this problem subsequent to radical mastectomy and with a subsequent survival rate probably less than that for patients without this manifestation of the disease. None of the patients with local recurrence after simple mastectomy remained permanently free of disease after radical. Apparently these patients had more extensive involvement than was grossly evident on clinical examination. On the other hand, with the added procedure of radical mastectomy, three of these four patients lived more than five years following their initial procedure, and lived clinically free of disease a generous portion of that time. It is possible that radical mastectomy was of some benefit.

The mere presence of palpable axillary lymph nodes was of no aid in defining a group with a poor prognosis. The nodes contained neoplasm only slightly more frequently when they were palpable than when they were not. However, when the nodes measured 2 cm. or more in diameter, or were fixed, they almost invariably contained tumor and did indicate a relatively poor prognosis.

The fact that prolonged delay following simple mastectomy was associated with reduced survival was obviously due to a selection factor. Patients seen early were those referred routinely for postoperative radiotherapy to supplement the surgery already performed. Late referrals usually meant that signs of progressing disease had appeared. Of ten patients referred five or more months following simple mastectomy all except one had either local recurrence or axillary adenopathy. This is in contrast to 13 patients who were referred in less than five months, none of whom had local recurrence and only four of whom had axillary adenopathy. The high five year survival (72.7 per cent) obtained in the very early group, i.e., the 11 cases with a delay of two months or less, appeared to be largely a consequence of the low number of patients with histologically involved axillary lymph nodes (27.2 per cent).

The literature provides little evidence that simple mastectomy alone is adequate treatment for an unselected population with breast carcinoma. It is generally held that additional therapy is needed. The supplementation of simple mastectomy with radiotherapy or discretionary axillary dissection has been advocated, and results have been published showing survivals comparable to those of radical mastectomy.[3, 4, 5] In the present series of patients conversion to radical mastectomy was performed. It is interesting to note that if the total period of survival following simple mastectomy is considered, a 66.7 per cent five year survival rate results. Whether equal benefit would have been obtained from a possibly less traumatic procedure supplementing the simple mastectomy is indeterminate. No comparable series is available at Ellis Fischel in which patients referred after simple mastectomy without evidence of inoperability were treated with either radiotherapy or axillary dissection.

SUMMARY

A group of 29 patients treated with radical mastectomy at the Ellis Fischel following simple mastectomy elsewhere for carcinoma of the breast is reviewed. Five patients are excluded because of complicating factors in treatment.

The five and ten year survival rates of the remaining 24 patients following radical mastectomy (54 per cent and 37 per cent respectively) are not significantly different from those of other patients treated initially with radical mastectomy at this institution.

The presence of palpable axillary lymph nodes did not appear to indicate a poor prognosis, unless the nodes were fixed or are at least 2 cm. in diameter. The data suggests that patients with local recurrence after simple mastectomy have a higher incidence of local recurrence and a less hopeful prognosis subsequent to radical mastectomy than patients without local recurrence. A negative correlation is evident between the delay following simple mastectomy and the survival subsequent to radical mastectomy.

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ROBERT W. WRIGHT, M.D., *Kansas City, Kansas*

The Establishment of the Cancer Detection Center in a Private General Hospital

A report on the development of a workable cancer detection clinic, geared to the needs of the middle-income patient. The clinic is located at Providence Hospital in Kansas City, Kansas. Dr. Wright, a former resident at Ellis Fischel, is now engaged in the private practice of surgery in that city.

THIS PAPER is a report on the coordinated effort of a medium-sized private general hospital and its medical staff to establish an effective cancer detection center.

The clinic is an open clinic in a private general hospital of approximately 230 beds and has been in operation for 38 months. It was designed for the early detection of cancer in asymptomatic patients. The need for the clinic was evident because of the continued appearance of far advanced stages of all forms of malignancy seen among private patients first presenting for treatment. It was a rare cancer indeed, even in private practice, that was treated early. Holding to the concept that there is a time when cancer starts, a time when it spreads, and a time when it kills, we felt that a stronger effort should be made to detect it in the first period. The doctors on our staff and in our community are doing a good and conscientious job, but on seeing an average of 35 to 40 people a day, most did not have time nor facilities for performing a complete cancer detection examination.

DEVELOPMENT AND APPROVAL

The concept of setting up a cooperative cancer detection clinic came from the Idea Committee of the medical staff. It was presented to a smaller group of doctors who in turn presented the idea and the design to the executive committee of the hospital which in turn approved it. The proposal was presented to the general medical staff, and one entire staff meeting was involved in the establishment and approval of this cancer detection center. We have not enjoyed whole-hearted support of all of the members of the medical staff, but neither have we had their animosity. The sustained growth and continued existence of the clinic are the best indicators of its acceptance by both the medical staff and the patient.

THE CLINIC

The medical staff approved the development of a facility in the hospital, much like the emergency room, where physicians could perform a complete history and physical examination. It acquired a technical staff of people trained to prepare patients for the examination, so as to take a minimum of the doctor's time. The technical staff assists the patient in completing a comprehensive check-off history sheet, including questions relevant to cancer and the family history of cancer, collects the routine laboratory specimens, including a complete blood count and urinalysis, prepares the patient for the routine chest X-ray and gives the cleansing enema preparatory to sigmoidoscopic examination. When the physician arrives he reviews the history in detail and performs a complete physical examination, including indirect laryngoscopy and a sigmoidoscopic and digital rectal examination. Stool is checked for occult blood. A pelvic examination with a Papanicolaou smear of the cervix is performed on all women, and mammography is performed on all women over 35 years of age. In addition, all men have a Papanicolaou smear performed on bronchial secretions. The medical staff has a requirement that the examination be a complete one, i.e., the clinic cannot be used for "just a sigmoidoscopic examination" or "just a Pap smear." The total examination takes about 2½ hours of patient time and 30 minutes of physician time. *No treatment is given in the clinic.* This has been an important policy in insuring the acceptance of the clinic by the medical staff.

FOLLOW-UP AND YIELD

When all reports are available, the examining physician reviews them and informs the patient of the results. Referred patients are sent back

(Continued on page 1032)

RICHARD E. JOHNSON, M.D., ***Columbia***

Cytologic Screening for Cancer Of the Uterine Cervix

The relation of carcinoma *in situ* of the uterine cervix to invasive carcinoma is not yet completely defined. The ordinary data based on screening and rescreening of selected populations, such as patients attending an out-patient gynecologic clinic or referred to a practicing gynecologist, cannot throw much light on that relationship. Such data can, however, give some idea of the economic costs of case discovery. For this purpose we have tabulated the data from cervicovaginal smears examined in the laboratory of the Boone County Hospital over the four year period, 1960-1963 inclusive.

During this period a total of 14,294 cervicovaginal smears were examined. Of this total there were 8,602 in whom the examination was the first one recorded for the particular individual in this particular laboratory. The remaining 5,692 represent re-examinations. Not included in these figures are persons who had had a previous report of suspicious cells from this laboratory. Further, to the best of our knowledge, no case with suspicious cells among the initial examination group had had a previous report of suspicious cells from another laboratory. Also excluded, are three cases of clinically obvious invasive cancer in which the smear was more or less an incidental feature of the diagnostic workup. Finally, all cases of endometrial carcinoma have been excluded.

The presence of slightly or strongly suspicious cells has been reported in 103 of the grand total of 14,294, yielding a frequency of 7.2 per 1,000 smears. For the initial examination group there were 73 out of 8,602 or 8.4 per 1,000 cases. For the re-examination group the figure is 30 of 5,692 or 5.2 per 1,000. Histologic material is available in 76 of the 103 cases principally in the form of cervical cones. Abnormal epithelium was found in 43 cases or 3.0 per 1,000. For the initial examination and re-examination groups the figures are 3.5 and 1.9 per 1,000 respectively. By "abnormal epithelium" we refer to a bizarre nuclear pattern with some degree of impaired keratinization and having the appearance of malignancy. Obviously, this is a matter of personal opinion. It includes both carcinoma *in situ* and the more advanced forms of dyskariosis. In order to insure some uniformity of interpretation, the entire group of histologic slides was reviewed and classified without knowledge of the identity of the patient or of the initial interpretation. It was hoped that in this manner the category termed "abnormal epithelium" would include a reasonably constant, although unknown proportion, of lesions predisposed to transformation into an invasive cancer. The two cases in which invasion was identified by microscopic examination have been kept in this category.

Evidence to date shows no sharply defined relationship between carcinoma *in situ* of the uterine cervix and invasive carcinoma. Author concludes that such carcinoma *in situ* may eventually prove to be a clinical entity.

Dr. Johnson is Pathologist at Boone County Hospital, Consulting Pathologist at Ellis Fischel and Clinical Associate Professor of Pathology at the University of Missouri Medical Center.

The frequency of abnormal epithelium has not remained constant over the four year period. The data are shown in Table 1. In the initial examination group the frequency remained fairly constant for three years and then sharply decreased. For the re-examination group the decline began one year earlier and was more gradual. A similar experience was reported by Gray, Barnes and Lee. In the city of Louisville, Kentucky a mass screening program was introduced in the middle of the year 1956. The numbers of new cases of carcinoma *in situ* seen each year at one institution in the area (Norton Infirmary) are as follows:

1953	6	1957	72
1954	11	1958	33
1955	14	1959	20
1956	18		

In the calendar year 1957 there was a consider-

TABLE 1

FREQUENCY OF ABNORMAL EPITHELIUM, HISTOLOGICALLY CONFIRMED, AT INITIAL CYTOLOGIC EXAMINATION AND UPON RESCREENING

	Initial Examination			*Re-Examination*		
Year Calendar	TOTAL	ABNORMAL	RATE PER 1000	TOTAL	ABNORMAL	RATE PER 1000
1960	2214	9	4.1	601	2	3.3
1961	2236	9	4.0	1274	4	3.1
1962	2089	9	4.3	1836	3	1.8
1963	2063	3	1.5	1981	2	1.0
Total	8602	30	3.5	5692	11	1.9

able increase followed by a prompt decline nearly to pre-cytology levels by 1959. The authors did not subdivide their cases in terms of initial and re-examination. In our community local facilities for examination of smears first became available in 1957, and their utilization gradually increased to a sustained level of initial examinations in 1960 and subsequent years.

Both sets of figures can be explained by the combined effect of two factors. First, because of the slow clinical evolution of carcinoma *in situ* there exists in a community a backlog of asymptomatic and mildly symptomatic cases which provides a pool for case finding by routine screening. When this pool is exhausted after a period of a few years the frequency of case finding abruptly declines. Second, the initial examination misses some of the cases, and these are then transferred to the re-examination group to form a smaller pool which is then subsequently depleted by rescreening.

This phenomenon can be shown in another manner by tabulating the data as shown in Table 2. Here, the cases have been grouped, first by initial and re-examination, and then the latter according to the calendar year of the re-examination compared to that of the initial one. It seems evident that a substantial number slipped through the initial screening to be picked up principally by re-examination in the next calendar year. In order to reduce the effect of differences in age, distribution Table 2 has been repeated in Table 3 but includes only cases in the age group 30-49. The same trend is noted, but the initial frequency is higher and the decline after the first rescreening is more marked.

TABLE 2

FREQUENCY OF ABNORMAL EPITHELIUM, HISTOLOGICALLY CONFIRMED, AT INITIAL EXAMINATION AND BY CALENDAR YEAR OF RESCREENING RELATIVE TO THE INITIAL EXAMINATION. ALL AGE GROUPS INCLUDED

Examination	*Total*	*Abnormal*	*Rate Per 1000*
Initial	8602	30	3.5
Rescreen, 1st Year .	1948	6	3.1
2nd Year	1717	3	1.7
3rd Year	2027	2	1.0

TABLE 3

SAME AS TABLE 2 BUT LIMITED TO AGE GROUP 30-49 INCLUSIVE

Examination	*Total*	*Abnormal*	*Rate Per 1000*
Initial	3108	20	6.4
Rescreen, 1st Year .	931	4	4.3
2nd Year	930	1	1.1
3rd Year	1153	1	0.9

TABLE 4

FREQUENCY OF ABNORMAL EPITHELIUM, HISTOLOGICALLY CONFIRMED, BY AGE GROUPS

Age Group	*Total Initial*	*Abnormal Initially*	*Rate Per 1000*	*Abnormal Initially*	*Rate Per 1000*
Under 20	256	0	0	0	0
20-29	3409	4	1.2	4	1.2
30-39	1829	10	5.5	13	7.1
40-49	1280	10	7.8	11	8.6
50-59	881	4	4.5	5	5.2
60 and over	947	2	2.1	3	3.2
Total	8602	30	3.5	36	4.2

It is evident that the initial examination and the first re-examination will produce substantial numbers of cases with abnormal epithelium, especially in women in the fourth and fifth decades. The yield then sharply decreases to a minor fraction of the original level. This is in line with the experience of others, such as that reported by Christopherson, Parker and Drye in a later report based on the Louisville study. Our study apparently enters at the peak of the curve of case-discovery. Local facilities for examination of the smears first became available in 1957, but no special effort was made to undertake mass screening. Consequently, the curve is more prolonged than in the Louisville experience.

In drawing up Table 3, we selected the age range 30-49 because this includes two-thirds of all cases with abnormal epithelium. The age specific frequencies for the initial examination group are shown in Table 4. There is a definite peak in the fifth decade. This is not due to selective screening for, if we add the cases from the first re-examination that presumably slipped through the initial screening, the pattern is not significantly changed other than to broaden the peak.

The explanation for the declining prevalence in the older age groups is of importance. Two basic mechanisms may be involved, (1) a decreasing incidence of development of abnormal epithelium or (2) an increasing frequency of removal from the pool. If decreasing incidence is the important mechanism, this may be due to a decline either in true pre-invasive cancers or in abnormalities of the epithelium that simulate but are not truly pre-invasive lesions. Since the decline begins in the sixth decade, it seems likely that the hormonal status of the patient may be a relevant factor. Removal from the pool could be due to spontaneous regression of either true or false pre-invasive lesions or to transformation into invasive cancer. The detection and elucidation of all these factors would require a carefully planned large-scale prospective study.

Discussion

If one assumes that all carcinomas of the cervix begin in the mucosal epithelium, then, by definition, every invasive carcinoma begins as carcinoma *in situ*. This definition misses the point. The important practical relation in which we are interested is whether there is a period in the clinical evolution of every invasive cancer of the uterine cervix in which it would be possible to establish the diagnosis by routine annual smear, the diagnosis being made while the cancer is still confined to the surface epithelium. In order to fulfill this requirement, the cancer must remain in the *in situ* stage for a period of one year, and the efficiency of cytologic screening must be such as to pick up the change in the epithelium soon after it occurs. If this should prove to be true, then the optimists would be correct in their statement that cancer of the cervix could be eliminated as a significant cause of death through the practice of annual routine smears.

It has been established by a number of observers that carcinoma *in situ* of the uterine cervix can run a prolonged course, remaining in the *in situ* stage for a period of several years and then passing over into an invasive form. The most complete data on this matter are furnished in a study by Peterson, first published in 1953 and subsequently brought up to date in a second publication in 1959. A series of 127 cases of epidermoid carcinoma *in situ* of the uterine cervix have now been followed for a period ranging from eight to 22 years. The diagnosis was established by biopsy and no subsequent treatment was given. During the first 15 years the rate of development of invasive cancer was fairly constant at approximately 3 per cent per year. After the 15th year there appeared to be a conspicuous leveling off of the curve with the suggestion that the frequency was approaching zero. At the 15 year point approximately one-third of the cases had developed invasive cancer. The remaining two-thirds of the cases may simply represent exceedingly slow evolution of the disease. Other possibilities include an error in the original diagnosis, removal by the biopsy procedure and spontaneous regression. The study can throw no light on the problem of whether all invasive cancers are derived from clinically recognizable carcinomas *in situ.*

The answer to the latter question could be obtained by selecting a community, in which the trend of the death rate for cancer of the cervix is well documented, and introducing a program of cytologic screening and rescreening. Eventually, it should be possible to reduce the death rate markedly if a substantial fraction of the invasive cancers pass through a prolonged *in situ* phase. Several such studies have been made. A major obstacle not yet overcome is to persuade a substantial proportion of the women to return for rescreening.

One of the first studies was carried out in Memphis, Tennessee. The current status of the study is summarized by Kaiser in the following quotation:

> "If all cases of invasive cervical cancer originate in an *in situ* lesion of long duration then early detection and treatment should be followed by reduction in invasive disease in the population after first screening. While no definitive statement is now possible as to whether or not this has happened, preliminary analysis of data bearing on it justifies raising the question as to whether this is really a significant sequence of events or if it is of a degree to be

detected by the methods applied and time presently elapsed in this study."

A more encouraging point is made by Boyes and Fidler from British Columbia. Through a mass screening program, more than one-third of the women in the cancer age have had at least one cytologic screening. The authors report a sharp progressive decline in the incidence rate of invasive cancer of the cervix, but at the time of their report no significant effect had been noted on the death rates.

It is evident from the data presented that the recognition of abnormal cervical epithelium is a relatively simple procedure. A substantial yield may be obtained by concentrating on the age group 30-49 and on the initial and first re-examination. It is surprising and disconcerting that despite this simplicity and high yield, there has been no clear demonstration of an effect of cytologic screening on the death rate due to cancer of the cervix. It is well to keep in mind that the relation of carcinoma *in situ* to invasive cancer of the uterine cervix may be more casual than causal. Such, for example, is certainly the case in the morphologically analogous lesions of the skin, Bowen's disease and invasive squamous carcinoma. Irrespective of the relation, if any, between *in situ* and invasive lesions, the publicity attendant upon any mass screening program should lead to earlier diagnosis of the invasive form and some decrease in death rate.

Summary

The recognition of abnormal epithelium in cervico-vaginal smears presents no serious problem. The yield may be increased by concentrating on the 30-49 years age group and on the initial and first re-examination. No reports have been found that demonstrate a decrease in the death rate from cancer of the cervix clearly attributable to cytologic screening. Carcinoma *in situ* of the uterine cervix may yet prove to be a clinical entity, independent of invasive cancer with only minimal overlap.

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From: *The Journal* of the Indiana State Medical Association, September, 1964.

The socialist-communist theme "from each according to his ability" and "to each according to his need" is neatly slaughtered by Thomas J. Shelly, a teacher at Yonkers High School. . . . Whenever students express admiration for communism, Mr. Shelly always offers to juggle their grades, taking from the high marks to add to the low marks, thus producing an average grade just above passing. When the students realize that this system removes all incentive for learning, they are quickly disillusioned and begin to believe in private enterprise.

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Cancer Chemotherapy: Application and Perspectives

A brief résumé, designed to inform the practicing physician in the practical application of cancer chemotherapy, both its historical perspectives and its place in the complete picture of current cancer treatment. The paper includes a table, listing chemo-therapeutic agents of choice in treating various forms of cancer.

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HISTORY

SINCE THE ERA of Hippocrates in the Fourth Century B.C. when caustic pastes were used for the treatment of many cutaneous and external lesions, including cancer, various medicinal remedies have been tried in an attempt to cure or control cancer. The Ebers Papyrus (1500 B.C.) mentions the use of arsenical ointments for ulcerated tumors; and in the First Century A.D., Porcius Cato discussed the application of coal for the same purpose. Galen (150 A.D.) advocated various diets and strong purgatives for the systemic control of cancer.

The beginning of modern cancer chemotherapy is commonly ascribed to the successful treatment of chronic granulocytic leukemia by Lissauer with Fowler's solution (potassium arsenite) in 1865. However, there were no real milestones in the development of new and effective antitumor agents until World War II, when the nitrogen mustard compounds were synthesized. This latter event, of course, was preceded by the use of mustard gas and the discovery of its systemic effects during World War I. From the late 1940's to the present time the discovery and development of the various antimetabolites, antibiotics, and newer alkylating agents useful in the palliation of cancer has occurred.[1]

RECENT ADVANCES

Recent data have suggested probable cures in choriocarcinoma of the uterus treated with Methotrexate, a folic acid antagonist. There is an increased percentage of five-year survivals in patients with carcinoma of the breast treated with nitrogen mustard as chemotherapy adjuvant to the radical mastectomy as compared to patients treated with radical mastectomy alone.[2, 3] More than 100 cases of acute leukemia have recently been reported to have survived more than 5 years, a fact which is attributed to the use of chemotherapy agents. In spite of these hopeful signs on the horizon, however, it is well to remember that for the most part, chemotherapy in treatment of cancer is merely palliative in nature and does not extend life appreciably.

UNTOWARD EFFECTS

The toxic manifestations of the agents used must be constantly remembered or the physician may do more harm than good to a given patient. The most frequent early signs of toxicity from the wide variety of drugs used for the treatment of cancer are anorexia, nausea, or vomiting. Major late manifestations of toxicity include: bone marrow depression with leukopenia, thrombocytopenia and their complications of infection and bleeding; stomatitis, ulcerations of the gastrointestinal tract, protracted vomiting and diarrhea; skin eruptions, alopecia, generalized weakness and occasional peripheral neuritis.

The most toxic agent in use today is 5-fluorouracil with which there may be an immediate mortality of up to 5-10 per cent. Additionally, experiments with various antineoplastic drugs, especially the alkylating agents on lower forms of animal life, demonstrate an ability to induce chromosome mutations. This ability is as efficient in potency and as wide in range as the changes induced by ionizing irradiation. Such studies have revealed that these drugs have a potentiality for carcinogenesis. The use of these drugs can be more favorably considered in incurable and near terminal cases, or when the evidence for marked tumor responsiveness urges their use.

RELATIONSHIP TO OTHER MODES OF THERAPY

Cancer chemotherapy, however, may be of symptomatic benefit to many patients with advanced cancer and in some cases may actually prolong life for a few weeks or months, or even years. In rare instances chemotherapy may be the primary treatment of early disease. Systemically administered chemotherapy agents usually should not be used in relatively asymptomatic patients, nor should they be used to replace standard recognized modes of therapy. Chemotherapy does not substitute for radical surgery in potentially resectable cancer or for radiotherapy in the treatment of localized malignant lymphomas. Recent studies which are still in progress are demonstrating that the perfusion of extremities with chemical agents, especially malignant melanoma, can give cure rates comparable to those obtained with radical surgery. A longer period of observation is required before this new method of treatment can be assayed in terms of five and ten year survivals.

Palliation of metastatic neoplastic disease by radiotherapy is also preferable to chemotherapy in many circumstances such as painful metastasis to bone and in the initial treatment of chronic myelogenous leukemia by irradiation of the spleen. Adjuvant chemotherapy is still in extensive clinical trial and should remain investigative until further data have been accumulated. The large federally sponsored breast adjuvant program which is testing radical mastectomy with and without Thio-TEPA as an adjuvant is showing a continually changing pattern of effectiveness. Several more years must pass before we have an estimate of the true effectiveness of Thio-TEPA as an adjuvant to surgery. At the latest report, it appears that patients with positive lymph nodes and pre-menopausal groups of women are showing some improved survival.

CLASSIFICATION OF AGENTS

Modern chemotherapy may be considered to include six categories of agents (excluding radioactive drugs) useful in the treatment of cancer. They are: 1. the alkylating agents, nitrogen mustard and its derivatives; 2. the antimetabolites, including antagonists of folic acid (amethopterin), purines (6-MP) and pyrimidines (5-FU), all of which are important in inhibiting the synthesis of nucleic acid; 3. the antibiotics, actinomycin D and others less well known; 4. the antimitotics, such as demecolcine; 5. the sex hormones, namely the estrogens, androgens and progesterone; and 6. the adrenal cortical hormones, cortisone, prednisone, and others.

The foremost targets of cancer chemotherapy have been the leukemias and lymphomas due to the fact that they often respond well to treatment and they are generally incurable at the inception of disease with hope only for palliation. However, with the continued development of new drugs and the increasing publicity directed toward their use in the treatment of cancer, a greater interest has been apparent during the past several years, not only among the medical profession but among the lay public as well.

EFFICACY OF DRUGS IN TREATMENT OF CANCER

The following information was compiled by review of the world medical literature through June, 1964. This table presents the chemotherapeutic agents of choice in treating various forms of cancer and their reported efficacies with recommended dosages.

Disease	*Agents of Choice*	*Per Cent Response*
Acute leukemia, children[4-9]	Corticosteroids + 6-MP	70% (33 wks. mean duration)
	Corticosteroids (only)	50-70% (9 wks. mean duration)
	Methotrexate	45%
	6-Mercaptopurine	40%
	Cyclophosphamide	27%
Acute leukemia, adults[4, 6, 8]	Corticosteroids	50%
	6-Mercaptopurine	15%
	Methotrexate	15%
Chronic myelocytic leukemia[10-13]	Busulfan	85-90%
	Demecolcine	85-90%

Chronic lymphocytic leukemia[13]	Chlorambucil	60-85%
	Corticosteroids	Especially useful in treatment of hemolytic anemia
Multiple myeloma[14, 15]	Melphalan	50%
	Cytoxan	25%
Hodgkin's disease[16-21]	Nitrogen mustard	70%
	Chlorambucil	70%
	Vinblastine	50%
Lymphosarcoma[22]	Methotrexate	30%
	Nitrogen mustard or chlorambucil	20%
Mycosis fungoidus[23, 24]	Methotrexate	50%
	Vinblastine	50%
	Alkylating agents	50%
Choriocarcinoma of uterus[25-29]	Methotrexate	50-80%
	Vinblastine	50%
	Actinomycin D	50%
Carcinoma of ovary[26, 30]	Alkylating agents	35-50%
	5-Fluorouracil	35%
Carcinoma of endometrium[31, 32]	Delalutin	35%
Carcinoma of cervix[26]	Nitrogen mustard	66% (very short term benefit)
Carcinoma of vulva[26]	None	
Carcinoma of breast[33, 34]	Estrogens	36% (especially superior if cancer occurs after fourth post menopausal yr.)
	Androgens	20%
	Alkylating agents	36% (response in terminal patients)
Carcinoma of prostate[35, 36]	Estrogens	70%
Adenocarcinoma of kidney	None	
Wilms Tumor[42-44]	Actinomycin D + x-ray	50%
Carcinoma of Bladder[45, 46]	Thio-tepa (bladder installation)	66%
	Melphalan	60%
Carcinoma of testes[47]	Chlorambucil + Methotrexate + Actinomycin D	70% (all three drugs in combination)
Carcinoma of adrenal cortex[48]	o,p'-DDD	70-80%
Carcinoma of lung[49]	Alkylating agents	33% (for short time only)
Carcinoma of esophagus[37]	Melphalan + Demecolcine	35%
Carcinoma of stomach[38-40]	5-Fluorouracil	25-33%
Carcinoma of pancreas[38-40]	5-Fluorouracil	25-33%
Carcinoma of colon[38-40]	5-Fluorouracil	25-33%
Squamous cell carcinoma of head and neck[41]	Methotrexate Regional perfusion + Folinic acid	25-50%

Sarcoma (all types)[50]	Perfusion with Melphalan + Actinomycin D	60%
Tumors of bone[52]	Melphalan perfusion	50%
Retinoblastoma[51]	TEM + X-ray X-ray alone	80% cure 23% cure

DOSAGES OF ANTITUMOR AGENTS

I—Initial dose
M—Maintenance dose

I. Alkylating Agents
1. Nitrogen mustard .2-.4 mgm/kg IV (may repeat in 4-6 weeks)
2. Chlorambucil (Leukeran®)
   I—6-12 mgm per day p.o.
   M—2-6 mgm per day p.o.
3. Triethylenethiophosphoramide (Thio-TEPA®)
   I—0.2 mgm/kg/day x 5 IV
   1.0 mgm/kg (1 dose) IM
   Bladder instillation—90 mgms in 100 ml saline for one hour
   M—7.5-15.0 mgm/week—IM after three weeks
4. Cyclophosphoramide (Cytoxan®, Endoxan®)
   I—3-4 mgm/kg/day x 10, IV or p.o.
   M—50-100 mgm/day p.o.
5. L-Sarcolysin (Melphalan®, Alkeran®)
   I—6-10 mgm/day p.o.
   M—2-4 mgm/day p.o.
6. Busulfan (Myleran®)
   I—4-10 mgm/day p.o.
   M—2-4 mgm q 1-2 days p.o.
7. TEM
   .08 mgm/kg IM 24 hours prior to x-ray therapy for retinoblastoma

II. Antimetabolites
1. Amethopterin (Methotrexate®)
   I— and M—2.5-5.0 mgm/day p.o. in leukemia
2. 6-Mercaptopurine (6-MP, Purinethol®)
   I— and M—2.5 mgm/kg/day p.o.
3. 5-Fluorouracil (5-FU)
   I—15 mgm/kg/day x 4-5 days IV
   M—15 mgm/kg/week IV when WBC—$4000/mm^3$

III. Steroid Compounds
- A. Androgens
  1. Testosterone Propionate 100-200 mgm/week IM
  2. Fluoxymestrone (Halotestin®) 10-30 mgm/day p.o.
- B. Estrogens
  1. Diethylstilbestrol 5.0 mgm, 3x/day p.o.
  2. Ethinyl Estradiol (Estinyl®) 1.0 mgm, 3x/day p.o.
- C. Progesterone
  1. Hydroxyprogesterone Caproate (Delalutin) 1.0 gm 1-2x/week IM
- D. Adrenal Cortical Hormones
  1. Cortisone Acetate 50-300 mgm/day p.o.
  2. Hydrocortisone Acetate 50-300 mgm/day p.o. or IV or IM
  4. Prednisone 10-60 mgm/day

IV. Miscellaneous Drugs
1. Demecolcine (Colcemide®)
   I—6-10 mgm/day p.o. until WBC drops to $25,000/mm^3$
   M—3-5 mgm/day p.o.
2. Actinomycin D (Cosmegen®)
   15 mgm/kg/day x 5 IV (may repeat dose every 2-4 weeks)
3. o,p'-DDD
   2-10 gms/day p.o.
4. Vinblastine (Velban®)
   0.1-0.15 mgm/kg/week IV
5. Vincristine (Oncovin®)
   0.05-0.075 mgm/kg/week IV

V. Regional Perfusion
1. Methotrexate (internal carotid artery) for squamous cell carcinoma of head and neck
   50 mgm/day x 4-13 days
   +Folinic Acid 6-9 mgm q 6 hours IM to decrease toxic effects
2. Melphalan (for primary bone tumors)
   50 mgm/week for 2-6 weeks intra-arterially
3. Melphalan
   .8-1.7 mgm/kg + Actinomycin D 40-50 mgm intra-arterially for sarcomas

In the treatment of chronic leukemia, maintenance dosage should lower the leukocyte count to a level between 3,000 and 4,000 per cubic mm. in order to assure a pharmacologically effective dose, otherwise, the antitumor effect is likely to be inadequate. In steroid hormone therapy of solid tumors there is no correlation between the leukocyte count and the antitumor effects.

New Drug Trials

The Ellis Fischel State Cancer Hospital is continuing its third year of participation in the new drug trials of the cooperative chemotherapy group program of the National Cancer Institute. In these cooperative studies, a group of approximately five to twenty cancer institutes, universities, clinics, and hospitals work closely in the use of uniform protocols in the study of promising new drugs. This vast clinical experience in new drugs can be rapidly accomplished, allowing only a minimal delay in bringing the benefit of cancer drug research to patients. Phenylalanine mustard, now marketed under the trade name *Alkeran* (Burroughs Wellcome), received much of its initial clinical study in the cancer chemotherapy cooperative programs. This agent has recently been approved by the Food and Drug Administration for use in multiple myeloma.

Studies recently in progress at the Ellis Fischel State Cancer Hospital, under the National Cancer Institute program are as follows:

1. A comparison of effectiveness of 6-mercaptopurine with thioguanine and thioguanosine in acute leukemia.
2. An ancillary myeloma study. This report of the natural history of plasma cell myeloma in 185 patients was reported in the *JAMA* May 25, 1964.
3. The use of cytoxan in multiple myeloma, reported in the *JAMA* September 7, 1964.
4. Cytoxan in acute leukemia.
5. A-8103 in solid tumors. This molecular is a piperazine derivative of busulfan (Myleran®), and it is manufactured by Abbott Laboratories.
6. A-8103 is also being tested in chronic granulocytic leukemia.
7. A-8103 is in trial for control of polycythemia vera.
8. A-20968. Another piperazine derivative of busulfan has been effective in an interesting array of tumors, some of them unusual solid tumor types.
9. A-20968. Trial in chronic granulocytic leukemia.
10. Elderfield Mustard, a pyrimidine compound with alkylating properties similar to nitrogen mustard. It is being screened in solid tumors.
11. A comparison of 6-mercaptopurine, 9-ethyl mercaptopurine, and 6-mercaptopurine riboside in acute leukemia.
12. Hexamethylmelamine. This drug has a structural formula similar to triethylenemelamine (TEM), it is in trial in both solid tumors and in the leukemia and lymphoma group.
13. A-649. An antitumor antibiotic manufactured by Bristol Laboratories.
14. Pactamycin, an antitumor antibiotic manufactured by Upjohn, in trial in solid tumors and in hemopoietic malignancies.

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(Continued on page 1034)

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Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons containing 16 and 30 single-dose packets.

1. Welch, C. E., Diverticula of the Alimentary Tract, in Conn, H. (editor): Current Therapy—1961, Philadelphia, W. B. Saunders Company, 1961, pp. 224-225.

SEARLE

Research in the Service of Medicine

EDITORIAL

Since the inception of Ellis Fischel State Cancer Hospital in 1939, one responsibility has been to meet a challenge made by the enabling state legislation to conduct ". . . such scientific research as will promote the welfare of indigent patients."

This paper is written to acquaint the Missouri medical community with current efforts toward fulfilling this obligation. The report is neither detailed nor all-inclusive, but is designed to provide the practicing physician with some knowledge and perspective of the investigations being made by the Hospital staff. For those practitioners particularly involved in specific aspects of cancer, this listing may serve as an avenue toward further reading and better understanding of certain cancer problems relevant to the Missouri population—not to imply that Cancer is fundamentally different in Missouri from elsewhere, but rather to suggest that cancer problems studied in a population of Missourians may have particular interest for those practicing medicine in this state.

During 25 years Fischel Hospital has cared for over 33,150 different persons. The accumulated records of this number of patients have resulted in an unusually large clinical "library" of neoplastic disease. When these records are researched, much useful information is found concerning the care of patients with cancer. Some recent results of these researches are listed below according to body systems. Reprints of many are available.

HEAD AND NECK

Planned surgical-roentgen-therapeutic approach to cancer of the maxillary antrum and end results.
Roentgenotherapeutic techniques for carcinoma of the maxillary antrum.
Natural history of verrucose carcinoma, review of 89 cases.
Analysis of the results of treatment in cancers of the buccal mucosa (160 cases).
The behavior of parotid neoplasms.

BLOOD

Leukemia: a statistical analysis of 209 cases at Ellis Fischel.
Multiple myeloma: general aspects of diagnosis, course and survival.
Hemorrhagic thrombocythemia: a sixteen year survival controlled with radio phosphorus 32 and review of the literature.
An analysis of 450 cases of lymphoma at Ellis Fischel.
Metastasization of lymphomas.

SKIN

Behavior and management of epidermoid carcinomas of the lower extremities.
Indications and surgical technique for ilio-inguinal lymph node dissection.
Recurrent basal cell carcinomas.
Disseminated urticaria pigmentosa.

FEMALE PELVIS

Carcinoma of the vulva.
Problems in the management of advanced endometrial carcinoma.
Radical pelvic surgery combined with radiotherapy in the treatment of locally advanced ovarian carcinoma.
The detection and treatment of postirradiationally recidivated cancers of the cervix uteri.
Geographic profile of the carcinoma of the cervix in the state of Missouri.

CHEST

The total blood volume in patients with left-to-right cardiac shunts.
The detection and growth of intrathoracic neoplasms.
Chemodectoma of the mediastinum.

GENITO-URINARY

Epidermoid carcinoma of the penis.
Metastatic carcinoma to urinary bladder from tumors located in the breast.
Morphological changes in the testes of the rat under the influence of hormonal variations.
The effects of castration and long-term stilbestrol therapy on the incidence of skin cancer in males.
Morphology of carcinoma of the urinary bladder, clinical pathological correlation.

GASTRO-INTESTINAL

Carcinoma of colon with intestinal obstruction.
The rates and patterns of growth of 375 tumors of the large intestine and rectum observed serially by double contrast enema study (Malmo Technique).
Epidermoid cancer of anal margin and canal.

BONE

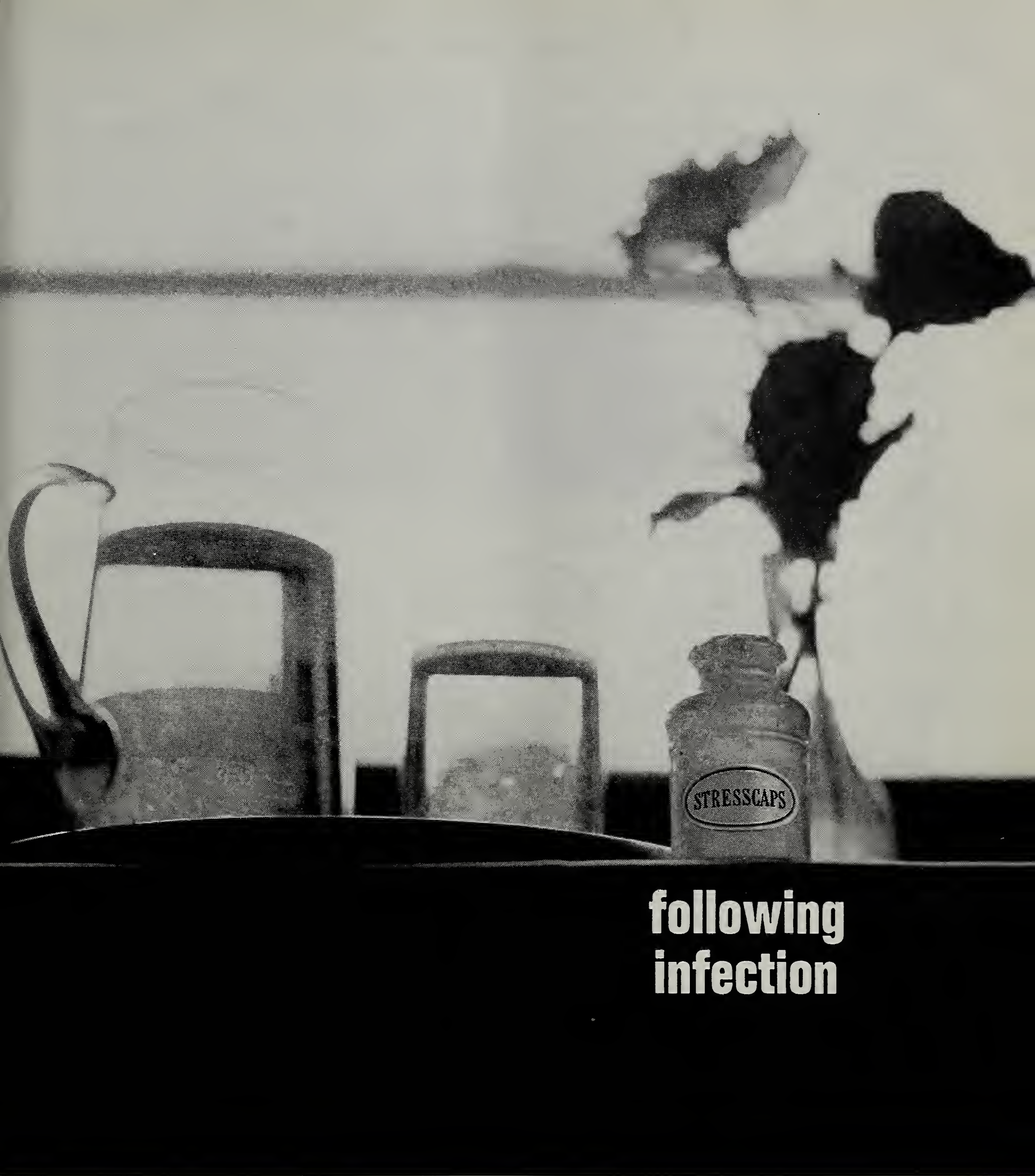
The rates of growth of skeletal sarcomas.

ONCOLOGY

Logistics of cancer detection in large populations.
Effect of palliative chemotherapy and radiotherapy upon tumor growth rates.
Study of operational methods for a regional tumor registry.
Multiple primary cancers among Missourians.

To date, most investigation conducted at this hospital has been retrospective analysis of clinical experience. Such studies showed certain correlations, independent variables, failures and

(Continued on page 1032)



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Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 (one month's supply) and 100 (three months' supply).

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Editorial *(Continued)*

successes of clinical care, and are useful to better understanding cancer.

Another means of investigating this disease for us lies immediately ahead. In addition to the *research* of clinical data we are now beginning a program of *prosearch*. Such investigation implies an exploration of the unknown, a look forward into unexplored areas, an evaluation of untried hypotheses that cannot be tested by reviewing experiences of the past. For this challenge the Cancer Research Center has been established. This non-profit corporation exists solely to meet these requirements and, when fully active, will contribute an important new aspect to our investigation of cancer. For the concerned physician we record some of the projects that will be undertaken soon.

Tumor blood supply and angiography.
Soft tissue roentgenography for tumor diagnosis.
Detecting presymptomatic lung cancer
Rheologic properties of human tumors.
Pattern of spreading tumors in surgical specimens treated with fat solvent.
Automation of tumor registries.
Endocrine palliation of primary gonadal tumors.
Ultrastructure of hormone-secreting ovarian neoplasms.
In vitro prediction of sensitivity of human tumors to chemotherapeutic agents.
Effects of radiation on DNA synthesis in malignant tumors in the rat.

We wish to emphasize that the activities of this institution have never been distant from, nor esoteric to, the practice of general medicine in this state. Such a relationship will persist. We remain enthusiastic to share both our research and prosearch plans; and we welcome inquiries, ideas and suggestions from all concerned with the problems of Missouri cancer patients.

GALEN B. COOK, M.D.

Cancer Detection *(Continued)*

to their personal physician who receives a full report. He arranges for any therapy which may be required. When a patient with indicated need for further examination or treatment has no personal physician, he is urged to select one with the assurance that a full report will be sent to the physician of choice. The clinic provides such patients with a list of available staff doctors.

During the first 38 months of operation, the cancer detection examination has uncovered an average of 27 malignant or premalignant lesions per thousand patients examined. Other non-neoplastic disorders requiring medical attention are also discovered regularly.

Staffing and Billing

The clinic can be used by any doctor on the staff for his own patients, submitting his bill directly to the patient if he desires. In addition, the clinic has an assigned rotating staff. Any physician can refer a patient to the cancer detection clinic, or a patient having no personal physician can make his own appointment for examination. In these latter instances, the patient is seen by the physician assigned to the clinic and this physician submits a bill of $11.50 directly to the patient. Duty in the clinic has helped some younger practitioners in getting their practice started. In addition to the physician's bill, the hospital submits a separate bill for use of the facilities, staff and routine laboratory and X-ray procedures for $33.00. If the examination indicates that further studies are required, these are scheduled later and billed separately. This arrangement is well accepted and fully understood by the patient and has been particularly appealing to the middle income group. No doctor who has once accepted an assignment to the clinic has ever resigned.

Education

The medical staff at Providence Hospital has made an effort to acquaint the community of the availability of the cancer detection clinic. Staff members speak regularly at various public gatherings such as PTA meetings and luncheon clubs. Movies on the early signs of cancer and the importance of periodic examinations are shown. At such programs, people are informed that the local medical community has organized on its own initiative the facilities and the professional staff necessary to offer periodic cancer detection examinations. The costs are discussed freely, and middle income families can budget for and afford the necessary services.

Council *(Continued)*

James G. Janney, M.D., St. Louis, and William R. Allen, M.D., Jefferson City, reported on the rheumatic fever secondary prevention program which is being contemplated for Missouri. A preliminary survey has indicated a need for the program, and after hearing an outline of the plans the Council voted to give MSMA support to the project.

Council members attending the meeting were:

Byron M. Stuart, M.D., *Chairman,* 5th District
Hector W. Benoit, Jr., M.D., *Vice Chairman,* 7th District
Joseph L. Fisher, M.D., 1st District
Lysle M. Bach, M.D., 2nd District
David N. Kerr, M.D., 3rd District
Paul H. Rother, M.D., 4th District
Rolla B. Wray, M.D., 6th District
Doyle C. McGraw, M.D., 8th District
E. A. Stricker, M.D., 9th District
W. D. English, M.D., 10th District
Leonard T. Furlow, M.D., *MSMA President*
Paul R. Whitener, M.D., *MSMA President-Elect*
John I. Matthews, M.D., *MSMA Secretary*
Charles R. Doyle, M.D., *MSMA Treasurer*

The next Council meeting will be held December 12 and 13.

This Council report covers only the highlights of the September meeting. The full official report of Council proceedings is on file in the Executive Office of MSMA and is available for examination by any interested member of the Association.

New Staffer for MSMA

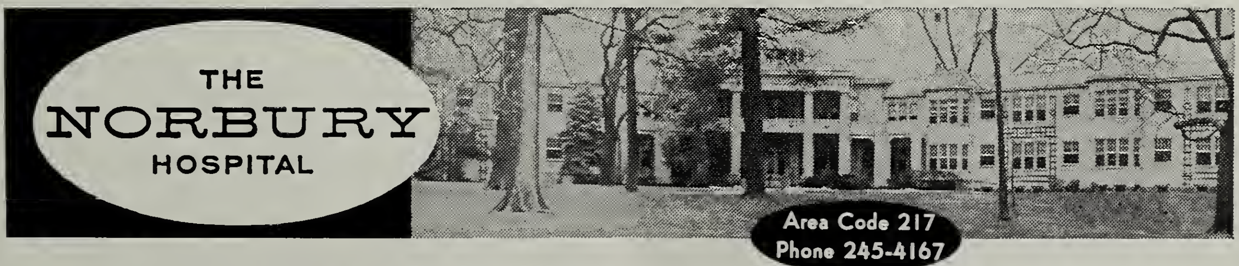
A veteran Kansas City radio and television newscaster and former Director of Communications of Jackson County Medical Society, Allen D. Smith, has joined the executive office staff of Missouri State Medical Association.

Mr. Allen D. Smith

Mr. Smith is a graduate of the William Allen White School of Journalism, University of Kansas, and for 15 years worked in radio-tv journalism as a newscaster and news director. In November of 1963 he was hired by Jackson County Medical Society to fill the newly created position of Director of Communications. Working with long-time Executive Secretary William H. Bartleson, Mr. Smith was responsible for the Society's publications, arranging radio-tv and public speaking appearances by members of the Society, and working with those Society committees which deal with professional, public or mass media relations.

In his new position with MSMA, Mr. Smith will be working under the direction of Executive Secretary T. R. O'Brien in supervising publication of MISSOURI MEDICINE, consulting on public relations and information matters, and assisting Mr. O'Brien in contact work with the state legislature and other governmental units.

Mr. Smith is married. He is a member of the national professional journalism fraternity, Sigma Delta Chi, the Kansas City Press Club and the Kansas City Public Relations Society.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New Members

Robert W. Brangle, M.D., 7333 Hurst Ct., St. Louis, has become a member of St. Louis Medical Society. Dr. Brangle is a native of St. Louis, Missouri, received his preliminary education at St. Louis University, and his M.D. degree at St. Louis University in 1959. He specializes in pathology.

Marion S. DeWeese, M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. DeWeese is a native of Corydon, Indiana, received his preliminary education at Kent State University, and his M.D. degree at the University of Michigan in 1939. He specializes in general surgery.

Robert C. Egan, M.D., 7820 Carondelet Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Egan is a native of Dunlap, Iowa, received his preliminary education at B. S. Creighton University, and his M.D. degree at Creighton University in 1958. He specializes in surgery.

Edward L. Eyermann, Jr., M.D., 1221 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Eyermann is a native of St. Louis, Missouri, received his preliminary education at Holy Cross College, and his M.D. degree at Yale Medical School in 1957. He specializes in neurology.

S. Michael Freiman, M.D., 4919 Forest Park Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Freiman is a native of Newark, New Jersey, received his preliminary education at Montana State University, and his M.D. degree at Washington University in 1955.

Guy H. Frumson, M.D., 150 Northland Medical Bldg., St. Louis, has become a member of St. Louis Medical Society. Dr. Frumson is a native of St. Louis, Missouri, received his preliminary education at Washington University, and his M.D. degree at State University of Iowa in 1957. He specializes in orthopedic surgery.

A. Basil Harris, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Harris is a native of Hamilton, Alabama, received his preliminary education at Birmingham-Southern College, and his M.D. degree at the Medical College of Alabama. He specializes in neurosurgery.

L. Howard Hartley, M.D., 1550 E. Sunshine, Springfield, has become a member of Greene County Medical Society. Dr. Hartley is a native of Riverton, Kansas, received his preliminary education at Joplin Junior College, and his M.D. degree at the University of Missouri in 1959. He specializes in internal medicine.

Alphonse W. Hilliard, M.D., 3167 Sheridan Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Hilliard is a native of Chicago, Illinois, received his preliminary education at Lincoln University, and his M.D. degree at Meharry Medical College in 1963. He specializes in general practice.

William E. Holt, M.D., 4524 Forest Park Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Holt is a native of Philadelphia, Pennsylvania, received his preliminary education at LaSalle College, and his M.D degree at the University of Pennsylvania in 1944. He specializes in psychiatry.

Charles R. Lewis, M.D., 511 Airport Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Lewis is a native of Canadian, Texas, received his preliminary education at Phillips University, and his M.D. degree at Washington University in 1961. He specializes in general practice.

Joseph K. McKinney, M.D., 4500 W. Pine Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. McKinney is a native of Muskogee, Oklahoma, received his preliminary education at Westminster College, and

Cancer Chemotherapy *(Continued)*

38. Hurley et al.: Treatment of advanced cancer of the gastrointestinal tract with antitumor agents. Gastroenterology **41(6)**:557-562, 1961.

39. Rochlin et al.: Use of 5-fluorouracil in disseminated solid neoplasms. Ann. Surg. **156(1)**:105-113, 1962.

40. Hart, G. D.: Palliative management of gastrointestinal cancer. Canad. Med. Assoc. J. **90(22)**:1265-1268, 1964.

41. Kiehn, C. L.: Chemotherapy for tumors of the head and neck. Plastic Reconstructive Surg. **30(5)**:577-580, 1962.

42. Silva Sosa, M.: Wilms' tumor: report of 100 cases. Cancer Chemo. Abst. No. 64-587, April-June, 1964.

43. Farber et al.: Clinical studies of actinomycin D with special reference to Wilms' tumors in children. Ann. New York Acad. Sc. **89**:421-425, 1960.

44. Tan et al.: Clinical experiences with actinomycin D, KS_2 and F_1 (KS_4). Ann. New York Acad. Sc. **89**:426-444, 1960.

45. Jones, H. C., and Swinney, J.: Thio-TEPA in the treatment of tumors of the bladder. Lancet **2**:615-618, 1961.

46. Erukhimov et al.: Experimental medicinal therapy of cancer of the bladder. Cancer Chemo. Abst. No. 62-2823, August, 1962.

47. Whitmore, J. R., Jr.: Some experiences with retroperitoneal lymph node dissection and chemotherapy in the management of testis neoplasms. Brit. J. Urol. **34(4)**:426-447, 1960.

48. Bergenstal et al.: Chemotherapy of adrenocortical cancer with o,p'-DDD. Ann. Int. Med. **53**:672, 1960.

49. Mendez, F. L., and Mourer, E. R.: Clinical experiences with chemotherapy for carcinoma of the lung. Dis. Chest **41(3)**:281-286, 1962.

50. Rochlin, D. B.: The therapy of sarcomas by isolation perfusion. Am. J. Surg. **105(5)**:615-618, 1963.

51. Hyman et al.: Results of combination therapy of retinoblastoma: a nine year study of 250 cases. International Cancer Conf. 359, July 22-28, 1962.

52. Merkulova, N. V.: The use of sarcolysine in some connective tissue tumors in man. Cancer Chemo. Abst. No. 62-547, February, 1962.

his M.D. degree at Washington University in 1958. He specializes in psychiatry.

Arnold W. Matera, M.D., 2025 Swift Ave., N. Kansas City, has become a member of Clay County Medical Society. Dr. Matera is a native of Brooklyn, New York, received his preliminary education at Trinity University, and his M.D. degree at the University of Texas in 1960. He specializes in general practice.

Michael Perley, M.D., 600 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Perley is a native of Brooklyn, New York, received his preliminary education at New York University, and his M.D. degree at Washington University in 1961. He specializes in internal medicine.

Ubaldo R. Rodriguez, M.D., 2314 Telegraph Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Rodriguez is a native of Torreon Coah, Mexico, received his preliminary education at Escuela Prep. V. Carranza, and his M.D. degree at Escuela de Medicina de la Universidad in 1958. He specializes in surgery.

Donald A. Senhauser, M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Senhauser is a native of Dover, Ohio, received his preliminary education at Columbia University, and his M.D. degree at the College of Physicians and Surgeons in 1951. He specializes in pathology.

Mary P. Shanahan, M.D., 211½ W. 20th St., Joplin, has become a member of Jasper County Medical Society. Dr. Shanahan is a native of Peoria, Illinois, received her preliminary education at St. Louis University, and her M.D. degree at St. Louis University in 1958. She specializes in obstetrics and gynecology.

Carl R. Slaughter, M.D., 405 E. 19th St., N. Kansas City, has become a member of Clay County Medical Society. Dr. Slaughter is a native of Little Rock, Arkansas, received his preliminary education at Hendrix College, and his M.D. degree at the University of Arkansas in 1959. He specializes in obstetrics and gynecology.

J. W. Tenpenny, M.D., 217 Oak St., Poplar Bluff, has become a member of Butler-Ripley-Wayne County Medical Society. Dr. Tenpenny is a native of Maryville, Tennessee, received his preliminary education at the University of Tennessee, and his M.D. degree at the University of Tennessee in 1951. He specializes in obstetrics and gynecology.

Porfirio M. Tiongson, M.D., 2623 Telegraph Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Tiongson is a native of Manila, Philippines, received his preliminary education at the University of Philippines, and his M.D. degree at the University of Santo Tomas in 1964. He specializes in surgery.

Roy A. Westerfeld, M.D., 115 Clay St., St. Charles, has become a member of Lincoln-St. Charles County Medical Society. Dr. Westerfeld is a native of St. Charles, Missouri, received his preliminary education at Washington University and his M.D. degree at the University of Missouri in 1959. He specializes in pediatrics.

Deaths

Casey, Shedric A., M.D., Lebanon, a graduate of the University of Tennessee, 1907; member of Mid Missouri County Medical Society; aged 78; died September 20, 1964.

Plumlee, William C., M.D., Springfield, a graduate of St. Louis University, 1925; member of Greene County Medical Society; aged 64; died September 28, 1964.

Coil, Paul E., M.D., Mexico, a graduate of Hospital College of Medicine at Louisville, 1904; member of Audrain County Medical Society; aged 84; died September 30, 1964.

Stewart, Floyd, M.D., St. Louis, a graduate of Washington University, 1896; member of St. Louis Medical Society; aged 91; died October 8, 1964.

Duncan, Ralph E., M.D., Kansas City, a graduate of Chicago College of Medicine and Surgery, 1914; member of Jackson County Medical Society; aged 72; died October 9, 1964.

Trowbridge, Ellsworth H., Sr., M.D., Kansas City, a graduate of the University of Minnesota; member of Jackson County Medical Society; aged 78; died October 30, 1964.

Leonard T. Furlow, M.D.

President's Message

The 1964 election is now history. On the surface, there would seem to be little question about the majority sentiment of the electorate. Many persons, however, are wondering if this apparent conclusion is valid. It is unfortunate that presentation of the real issues of the campaign was left to a well known professional actor, while the candidates concentrated on discussions of personalities. This leads one to wonder, whether those who now attempt to analyze the election are correct in concluding that the results indicate either a sharp rejection of "right wing extremism," at least, or majority acceptance of "welfare statism," at most.

It would appear that the administration will have little trouble pushing its Social Security "medicare" proposal through the next session of Congress. And yet, there is another possibility. "Medicare" was used as a political weapon in the recent campaign but, with the election past, there no longer should be any reason to belabor the issue for vote-getting purposes. It is conceivable that our newly elected officials will have the time, the inclination and the courage to take a long, hard look at the problem of health care for the aged.

We, of the medical profession, have already recognized the problem and have agreed that some solution is needed. We have supported one solution, the Kerr-Mills program; we have steadfastly opposed the solution which is offered by the welfare-staters. The outcome of the November election does not change this situation in any way.

I would urge every physician who feels strongly about this issue (admittedly, there are those who don't . . . even some who would embrace "medicare") to continue his efforts to tell the full story to his patients, friends, legislators and the general public. We should not capitulate on a matter of basic principle, simply because an emotion laden election didn't produce the results we may have desired.

I sincerely believe that our position on medical care for the aged is the true position, arrived at through objective examination of the problem and a logical synthesis of the solution. But, as newspaper columnist William F. Buckley, Jr. observes, "Truth is a demure lady, much too ladylike to knock you on the head and drag you to her cave. She is there, but the people must want her and seek her out."

The medical profession is obligated to make the truth readily available to the people, and to encourage them to accept her.

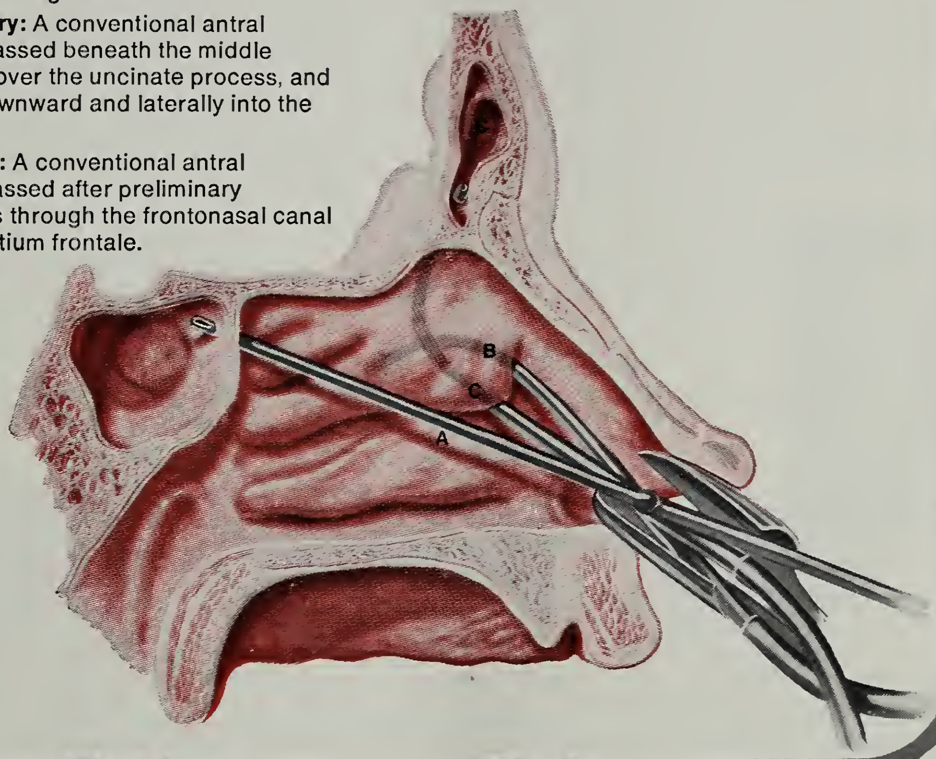
Leonard T. Furlow

A rhinologic approach to the sinuses
Sagittal anatomical section of nasal cavity showing approach for probing or irrigation by cannulas.

A—Sphenoid: A sphenoid cannula (under 13.5 cm.) passed around the middle and superior turbinates to the anterior wall of the sinus through its ostium.

B—Maxillary: A conventional antral cannula passed beneath the middle turbinate, over the uncinate process, and rotated downward and laterally into the ostium.

C—Frontal: A conventional antral cannula passed after preliminary maneuvers through the frontonasal canal into the ostium frontale.



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Before complications arise in colds and sinusitis, Neo-Synephrine solutions and sprays reduce nasal turgescence on contact — to promote essential aeration and drainage. Turbinates shrink, sinus ostia open and drainage is freed. Relief is instant and the threat of complications is lessened.

In the treatment of sinusitis, the 1/4 per cent solution is a preferred vasoconstrictor, "...most closely approximating physiologic composition with the least 'rebound' tendency...."* Gentle Neo-Synephrine is well tolerated by delicate respiratory tissues. Systemic effects are practically nil, post-therapeutic turgescence is minimal and repeated applications do not lessen its effectiveness. Neo-Synephrine has been a standard among vasoconstrictors since 1935.

Available in plastic nasal sprays for adults (1/2%) and children (1/4%), in solutions of 1/8, 1/4 or 1 per cent.

*Reed, G. F.: Sinusitis, New England J. Med. 267:402, Aug. 23, 1962.

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Woman's Auxiliary

I thought I led a busy life until this fall! When I look back, I wonder what I did with all of my spare time! I'd like to have some of it now!

At times it's been most difficult and heartbreaking. At other times it's been wonderful—my meetings with Lafayette-Ray, Grand River, Marion-Ralls-Shelby, Buchanan, Jackson, and the Clay County Auxiliaries and being treated like royalty! You doctors should be so proud of your wives!

Mrs. R. W. Bohnsack

The National Fall Conference at the Drake Hotel in Chicago was simply great. Highlights for me were Senator Dirksen's speech at the AMPAC dinner; the lovely brunch of the national Board of Directors to which I was invited as the president of the state from which our national president-elect, Betty Sutter, hails; the luncheon where Dr. Edward Annis spoke so eloquently and my name was drawn to sit at the head table with him and the national officers; the clever safety, AMA-ERF, disaster-preparedness skits; hearing Commander D. M. Hanson tell us that —"The medical supplies we send to foreign nations, and the work we do there tells others what Americans are really like"; being with Jane Crispell who helped me so much, and Marjorie Peterson, regional program chairman, Esther Bauman, regional disaster preparedness chairman, Ruth Kelling, national disaster preparedness chairman and since November 17 president of Southern Auxiliary, and Betty Sutter who presided as national president-elect so beautifully and of whom we are all so proud.

It was a joy to be in Memphis for the Southern Convention at the Hotel Claridge November 16-19 and to see our own Ruth Kelling installed as president and to present her with a gift from our Auxiliary. Sincere congratulations, Ruth! You were wonderful, as always!

Our own Fall Conference at Tan-Tar-A, October 28-29, was a fine success—thanks to the wonderful hostesses from the Fifth and Sixth Districts. Didn't they have things planned to a T? And the decorations were beautiful. Thank you so much! Also our thanks to all of those who helped so wonderfully with the program. It was a great pleasure to have Dr. and Mrs. Leonard T. Furlow and Mr. and Mrs. Tom O'Brien as well as Mrs. Chester Young from Kansas City—our north-central regional AMA-ERF chairman, and, of course, our own Betty Sutter. Thank you all so much. We all appreciated the doctors who came to carry our luggage and packages, too! We hope they enjoyed their much deserved rest.

Wasn't it fine of Dr. H. M. Hardwicke of the Division of Health to be there to present Macy Brady with the award for her work with the medical self-help courses? Congratulations, Macy! You're most deserving of this honor.

I hope you are all making plans for our state convention in St. Louis at the Chase-Park Plaza on April 4-7. St. Louis County is counting on you to help celebrate our 40th anniversary. And you want to know the results of the Bulletin contest, too! Get your baby-sitters lined up now!

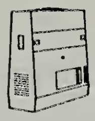
Did you get your IHA packages off to make someone happy this Christmas? And how about those senior citizens who need you so much?

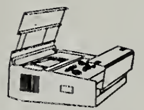
Your point system sheets, which you received at Fall Conference, should give you a good idea of what you should be working on. Don't make it a chore—make it a joy to serve your doctors and medicine for a BETTER HEALTH—BETTER WORLD!

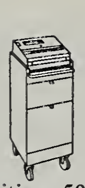
Aren't our new revised BYLAWS attractive and handy purse-size books? If anyone needs a copy, please let me know.

You're far too busy at this time of year with all of those packages to wrap and I must take my community chorus Christmas carrolling so I'll just say,

"HAVE A WONDERFUL CHRISTMAS FILLED WITH JOY AND PEACE AND GOOD HEALTH. AND MAY THE NEW YEAR BRING YOU MUCH HAPPINESS THROUGH YOUR SERVICE TO OTHERS!"







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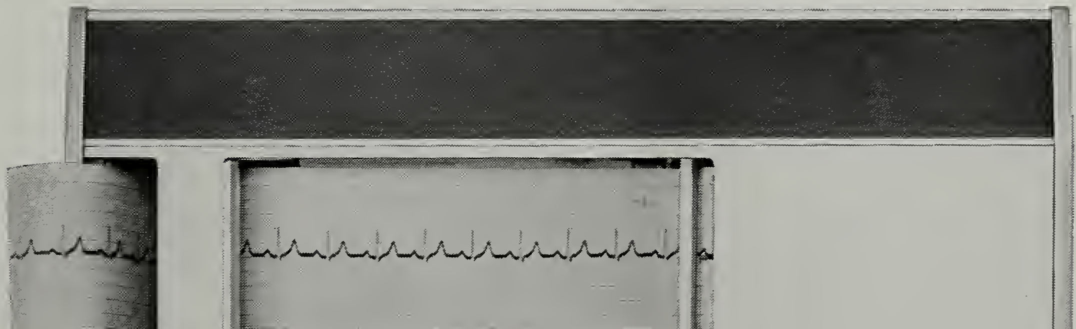

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County Society News

FIRST DISTRICT

COUNCILOR,
JOSEPH L. FISHER, M.D., ST. JOSEPH

Buchanan County Medical Society

Seventy physicians and their wives attended the first joint dinner meeting of the Buchanan County Medical Society and Auxiliary on October 7 in the Empire Room, Hotel Robidoux. The two groups voted to hold joint dinner meetings with separate sessions following for a trial period. The two presidents, Dr. William B. Rost and Mrs. E. F. Butler, presided at the two meetings.

Officers were chosen to head the Society for the coming year. Dr. William Redmond was elected president-elect; Dr. Irwin Rosenthal was selected as vice-president. Dr. Berwyn H. Moen was named secretary; Dr. Robert W. Kieber was chosen as treasurer for the 12th consecutive year. Dr. Sharon E. Waggoner will serve on the board of censors; Dr. John N. Martin was re-elected as MSMA delegate, with Drs. Thompson E. Potter and Richard V. Riddell as alternate delegates. Dr. G. Tyson Carpenter was elected to the committee on public policy; Dr. William B. O'Connor was chosen to be on the board of trustees; Dr. Rost was named to the executive secretary committee. The new officers and Dr. Herbert C. Senne, who has been president-elect during the past year, will be installed at the Society's annual meeting in November.

At the Auxiliary meeting, a business session was held, following which, State Senator John E. Downs talked on "Legislation."

Irwin Rosenthal, M.D., *Secretary*

Grand River Medical Society

A dinner meeting of the Grand River Medical Society and its Woman's Auxiliary was held at the Strand Hotel in Chillicothe, October 8. Following dinner, the ladies retired to a separate meeting and the doctors heard a scientific program presented by Hugh E. Stephenson, Jr., M.D., Department of Surgery, University of Missouri Medical School, on the subject, "Emergency Care of Thoracic Problems." A general discussion followed his formal presentation.

A short business session completed the evening's program.

Jack L. Vinyard, M.D., *Secretary*

SECOND DISTRICT

COUNCILOR,
LYSLE M. BACH, M.D., HANNIBAL

Chariton-Macon-Monroe-Randolph County Medical Society

The 17th Annual Dinner Meeting of the Chariton-Macon-Monroe-Randolph County Medical Society, the doctors' wives and guests, was held at the Country Club in Moberly on October 8. The principal speaker was H. M. Hardwicke, M.D., Acting Director of the Missouri Division of Health. In his remarks, Dr. Hardwicke criticized paternalism in government and particularly the extension of public health services beyond the point he feels appropriate. He praised the results of the oral polio vaccine clinics which have been sponsored over the state in recent months by local medical societies. The speaker indicated that in his opinion the public health service has no business practicing medicine. The United States has the finest medical care in the world, but he observed that the big problem is one of proper distribution, getting our fine medical care to those areas where it is needed. He insisted that doctors must have the right to accept patients and patients must have the right to choose their doctors.

Dr. Hardwicke was introduced by Dr. J. W. Fleming, secretary of the Society, after the president, Dr. Thomas S. Fleming had been called away from the meeting.

J. Will Fleming, M.D., *Secretary*

FOURTH DISTRICT

COUNCILOR,
PAUL H. ROTHER, M.D., ST. CHARLES

Lincoln-St. Charles County Medical Society

Thomas Thale, M.D., St. Louis, was the principal speaker at a dinner meeting of the Lincoln-St. Charles County Medical Society at the Golfview Inn in St. Charles on October 27. Dr. Thale used for his subject, "Indications for Various Types of Psychiatric Treatments." The presentation led to an interesting and provocative discussion.

The evening began with a social hour, followed by dinner and then the program. During

(Continued on page 1042)

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County Society News *(Continued)*

the business session, the annual election of officers for the new year was held.

Robert J. Fleming, M.D., *Secretary*

TENTH DISTRICT

COUNCILOR,
W. D. ENGLISH, M.D., CARDWELL

Cape Girardeau County Medical Society

The Tenth Annual Southwest Missouri Cancer Conference was held at the Colonial Tavern in Cape Girardeau on Monday night, October 5, with more than 60 doctors present.

The evening began with a social hour, followed by dinner and then the program. Joe N. Yaeger, M.D., president of the Cape Girardeau County Medical Society, opened the meeting and then called upon Dr. M. Shoss, chairman of the program committee, to introduce and take charge of the scientific part of the program. G. R. Ridings, M.D., professor and chief of Radiotherapy, University of Missouri Medical School, gave the first presentation on the subject, “Female Pelvic Cancer; Situations in Which Radiation Therapy Is Useful.” Following this discussion, A. MeChesney Evans, M.D., Chief of Internal Medicine, Ellis Fischel State Cancer Hospital, spoke on, “Chemotherapy and Terminal Care of Cancer Patients.”

A general question and answer period followed the formal presentations with a number of good stimulating questions coming from the floor. We are indebted to Drs. Ridings and Evans for their visit and to our program committee for this particular program.

Joseph N. Tygett, M.D., *Secretary*

Mineral Area County Medical Society

The meeting of the Mineral Area County Medical Society was held Thursday night, October 22, in the Hoctor Building of the State Hospital in Farmington. The meeting opened with a program presented by Dr. John McCarthy of St. Louis University on Cancer Chemotherapy. The program was interesting and was well received and numerous questions were asked following the lecture.

The item of business at the business meeting was the election of officers for the year 1965. The new president, who was elected by acclamation, is Paul Dennis, M.D. of Flat River; vice-president is John A. Brennan, M.D. of Farmington; secretary, C. W. Chastain, M.D. of Farmington, continuing in his present position.

No action was taken on pending application of Dr. Vester of Bismarck. Membership was notified that application had been sent to Dr. Sue Martin of Viburnum, but had not been returned.

It was suggested that physicians in this area who are not yet members of the medical society be included on the mailing list. This is in reference to Drs. Bryan Michaelis of Fredericktown, Dettmer of Ironton, Stanton Hardy of Desloge and Vester of Bismarck.

Following discussion of plans for a meeting in the near future with the local lawyers, the meeting adjourned.

Those in attendance were Drs. C. H. Appleberry, T. R. Bureham, C. E. Carleton, M. A. Haw, J. A. Brennan, C. W. Chastain, A. G. Karraker, R. A. Huckstep, W. A. Patton and Paul Dennis.

C. W. Chastain, M.D., *Secretary*

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WANTED—General Practitioner in a fast growing community, 30 miles north of Kansas City, within six miles of an accredited hospital, large trading area, excellent office facilities. Contact the Lawson Bank, Lawson, Missouri.

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ASSOCIATE NEEDED for a two man General Practice (Sears Foundation Building) in Southeast Missouri. Located 15 miles from two accredited hospitals. Present associate is leaving for mission field. For particulars, write or call J. Marshall Jung, M.D., Box 368, Illmo, Missouri. Colony 4-2135.

LOCATION WANTED: Oklahoma Graduate, age 31, married, military obligation fulfilled, general practice experience. Will complete general surgery residency June 1965. Desire group or partnership practice. Contact John E. Griffin, M.D., 2508 Mann Ave., Des Moines, Iowa 50310.

Ramblings of the Field Secretary

Dedication ceremonies for the recently completed Community Medical Center at Bowling Green were held on Sunday afternoon, October 11. More than 400 persons were present for the ceremonies and an inspection tour of the two-unit doctors' office building. This project was a result of local community initiative, hard work, persistence, and a fund raising drive involving many individuals and groups. These efforts were supplemented by the guidance and technical assistance of the Sears-Roebuck Foundation.

The principal address of the day was delivered by United States Senator Edward V. Long of Clarksville, Missouri. Senator Long praised the community for its local efforts in taking this forward step toward solving its own needs for health care facilities and professional personnel. He complimented the Sears-Roebuck Foundation as follows: "The Sears Foundation is performing a great service to America by helping towns to help themselves. Each town that receives the foundation's aid gets not only many man-hours of expert assistance in making surveys and drawing blueprints, but also the benefits of the Foundation's vast knowledge and experience. This great experience makes the guidance that Sears people offer invaluable. Their assistance is often essential in bringing qualified medical personnel to new facilities. No monetary value can be set on the services provided by this humanitarian foundation."

Among the honored guests present for the dedication in Bowling Green were (l to r): Drs. Ted Smith and John Day, Messrs. Gordon S. Williamson and Richard Stewart, Senator Edward V. Long, and Dr. W. B. Hildebrand.

Part of the crowd of more than 400 persons who inspected the new Community Medical Center building in Bowling Green during recent dedication ceremonies.

Others participating on the program were Mr. Gordon S. Williamson, president of the Community Medical Center Board of Directors; Mayor Willard Middleton of Bowling Green; Mr. Richard Stewart, Kansas City regional director, Sears-Roebuck Foundation; W. B. Hildebrand, M.D., Menasha, Wisconsin, representing the American Medical Association on the Medical Advisory Board to the Sears-Roebuck Foundation, and yours truly. The master of ceremonies was Mr. James Millan, attorney-at-law, of Bowling Green.

An enthusiastic response was given to the introduction of the two young doctors and their families who have located in Bowling Green. John Day, M.D., and Ted Smith, M.D., recent graduates of the University of Missouri Medical School, will use the new medical center facilities in their practice of general medicine.

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C. G. STAUFFACHER, M.D., Secretary

Missouri Academy of General Practice

Charles A. Nester, M.D., St. Louis, was elected president-elect of the Missouri Academy of General Practice during the organization's 16th Annual Assembly, October 31 to November 1, in St. Louis. Doctor Nester, who received his M.D. degree from St. Louis University Medical School in 1940, will take office as head of the 600 member organization of Missouri family doctors in 1965.

Doyle C. McCraw, M.D., Bolivar, was installed as president of the Missouri Academy succeeding Edson C. Carrier, M.D., of Kansas City who becomes chairman of the Board of Directors.

In one of his final official acts, outgoing MAGP president Dr. Edson C. Carrier (r) presents the 1964 Distinguished Service Award to Dr. H. M. Hardwicke, Acting Director of the Missouri Division of Health. Mrs. Carrier looks on.

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Retiring MAGP president Dr. Edson C. Carrier (r) formally inaugurates and extends best wishes to incoming president Dr. Doyle C. McCraw. More than 200 physicians attended the 1964 president's installation banquet.

Other new officers who were elected during the annual meeting were: Erroll W. Allen, M.D., Carrollton, vice president; John T. Crowe, M.D., Cape Girardeau, secretary-treasurer; Benjamin P. Eisenmann, M.D., New Haven, John P. Mabrey, M.D., Plattsburg, and Paul A. Roberts, M.D., Sweet Springs, members of the Board of Directors; Charles O. Metz, M.D., St. Louis, and C. Gordon Stauffacher, M.D., Sedalia, delegates to the American Academy of General Practice; Walter T. Gunn, M.D., St. Louis and Dr. Carrier, alternate delegates.

The two-day Assembly attracted 230 physicians, and attendance at each of the four scientific sessions was high.

During the president's installation banquet, the Academy's Distinguished Service Award for 1964 was presented to H. M. Hardwicke, M.D., Acting Director of the Missouri Division of Health. He was cited for his work in the field of public health while maintaining an excellent liaison with those physicians in the private practice of medicine.

The Academy's 17th Annual Assembly will be held next year in St. Louis on October 23 and 24.

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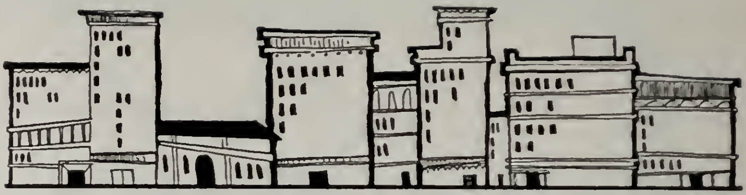
From the Medical Schools



New AAMC Director

The President of the Association of American Medical Colleges, George A. Wolf, Jr., M.D., has announced appointment of a new Executive Director for the Association. Moving into the position early next year will be Robert C. Berson, M.D., who has been serving during the past two years as Dean of the University of Texas South Texas Medical School in San Antonio. He will succeed Ward Darley, M.D., who has headed the AAMC executive staff for the past eight years.

Doctor Berson is a native of Brownsville, Tenn. and received his medical degree from Vanderbilt University in 1937. Prior to moving into medical education, he was in private practice and served in the U. S. Army during World War II.

UNIVERSITY OF MISSOURI

The University of Missouri has been awarded a grant of $30,399 by the National Institutes of Health for the continued support of research being conducted by Dr. Masuo Kodani, associate professor of obstetrics and gynecology at the School of Medicine. Dr. Kodani's study is titled "In Vitro Studies of Germ and Sertoli Cells." The project is directed toward successfully propagating spermatozoa, the male reproductive cells, in cultures so that they will undergo the same sequence of divisions and morphologic changes in the artificially created environment as they do within the live animal.

Dr. James A. Green, associate professor of the Department of Anatomy, has been awarded a grant from N.I.H. for $11,378 to continue his electron microscope study of the human ovary.

Dr. F. E. Doenges, associate professor of the Department of Anatomy, was awarded a grant from N.I.H. for $7,203 to continue a study of drug induced efferent activity in the cervical vagus nerve.

Dr. David Davis, associate professor and chief of the General Psychiatry Section, presented a paper at the Sixth International Congress of Psychotherapy in London, England. The paper contained a discussion of factors influencing discharge of patients from hospitals, particularly the "Neurosis of Affluence."

The Geriatric Nursing Research Council, composed of five members including Dr. James M. A. Weiss, has been working for several years on a major project evaluating the effects of skilled nursing care on institutionalized older patients. The results of these studies will be reported in a book entitled "Nurses, Patients, and Social Systems," to be published sometime during 1965. The important results of this project have been to demonstrate the markedly beneficial effects on the physical and mental health of clinically ill patients by the introduction of skilled nurses with special training in communication processes.

ST. LOUIS UNIVERSITY

Plans have been announced for a $16,500,000 rebuilding and renovation program for the Medical Center. The blueprint for the program is contained in a report by the Medical Center Council and Lay Board of Trustees which have been reviewing and studying the Medical School's needs and problems for the past two years. The report foresees the need for expenditures totaling $34,625,000 during the next ten years to finance expected plant improvements and expansion, faculty salaries and student aid programs.

The master plan calls for:

Construction of a multi-purpose building to house the Medical Center Library, Continuing Education and Medical Center Administrative offices;

Construction of a research wing addition to the School of Medicine;

Expansion and renovation of instructional, research and clinical facilities of the School of Dentistry;

Addition of a new 500-bed wing to Firmin Desloge Hospital;

Addition of two floors to David P. Wohl Memorial Mental Health Institute;

Renovation of 2nd and 3rd floors of Desloge Hospital to house the School of Nursing and Health Services;

Construction of additional student housing;

And construction of a multi-story parking garage.

Dr. G. O. Broun, Sr., retiring dean, was named dean emeritus of the St. Louis University School of Medicine at a testimonial dinner attended by medical alumni and wives from many parts of the nation. The Very Rev. Paul C. Reinert, S.J., University president, made the announcement as he read a citation in appreciation of Dr. Broun's leadership as dean of the School of Medicine from December, 1961 to October, 1964, and his more than 40 years of service on the faculty.

Dr. R. Emmet Kelly, president of the Medical Alumni Association, presented a book of letters of appreciation to Dr. Broun from more than 300 graduates of the School from 37 states. Dr. Daniel Sexton, associate professor of clinical medicine, announced that Mrs. Dorothy Quest, a St. Louis artist, had been commissioned to paint a portrait of Dr. Broun which will hang in the School of Medicine. The portrait is the gift of medical alumni throughout the nation.

The Division of Gastroenterology of the Department of Internal Medicine has received a grant award of $70,000 from the USPHS for a two year period of research under the direction of Dr. William A. Knight, Jr., associate professor of internal medicine and director of the Division. Under the grant, Dr. Knight will continue investigations of inflammatory and neoplastic diseases of the pancreas, some of which are related to cancer. His study will utilize radioactive drugs.

The appointment of four new faculty additions to the Department of Neurology and Psychiatry has been announced.

Dr. William E. Holt, assistant professor of psychiatry at the University of Pennsylvania since 1953, has been appointed associate clinical professor of psychiatry. Dr. Holt has been engaged in the active practice of psychiatry in the Philadelphia community since 1951. He is a graduate of the University of Pennsylvania School of Medicine.

Dr. George H. Zimny, who was associate professor of psychology at Marquette University from 1958 to 1962, has been appointed associate professor of psychology. He holds a M.A. degree in psychology and Ph.B. degree in philosophy awarded by Loyola University of Chicago and a Ph.D. degree in experimental psychology awarded by the University of Minnesota.

Dr. Edward Eyerman, formerly a National Institutes of Health postdoctoral fellow at the neurological Institute of Neurology at Columbia University, has been appointed assistant professor of neurology. He graduated from Yale Medical School in 1957.

Dr. Julius Ehik, assistant director of psychiatric

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service at Veterans Administration Hospital in St. Louis, has been appointed instructor in psychiatry. He received the doctor of medicine degree from Pazmany Peter University of Sciences, Budapest, Hungary and interned at McKennon Hospital in Sioux Falls, South Dakota.

Dr. Robert E. Olson, professor and head of the Department of Biochemistry and Nutrition at the University of Pittsburgh Graduate School of Public Health, has been appointed Alice A. Doisy professor of biochemistry and director of the Edward A. Doisy Department of Biochemistry. The Alice A. Doisy Professorship of Biochemistry will honor the late Mrs. Doisy's dedicated and unfailing support of the activities and objectives of the Department throughout Dr. Doisy's tenure.

Dr. Doisy, who began his long association with the School of Medicine in 1923, will continue to direct the Department of Biochemistry during the present academic year.

Dr. Francis X. Paletta, professor of clinical surgery, and director of the Section of Plastic Surgery at the St. Louis University School of Medicine, was honored at a testimonial dinner sponsored by the plastic surgery residency staff of St. Louis University Group of Hospitals. The event was in recognition of his 15th anniversary as a teacher and clinician.

WASHINGTON UNIVERSITY

Dr. Juan M. Taveras has been appointed director of the Edward Mallinckrodt Institute of Radiology. He is now professor of radiology at Columbia University College of Physicians and Surgeons, New York City. Dr. Taveras also will hold the position of professor and chairman of the department of radiology at the School of Medicine and will join the faculty soon after January 1, 1965. The new director, who has been on the Columbia University faculty since 1950, is internationally known for his research and publications dealing with radiology of the nervous system and is regarded as one of the most distinguished living neuroradiologists.

Dr. Taveras

Dr. Sarah A. Luse, professor of anatomy and pathology, has been named acting head of the department of anatomy. She will serve while Dr. Edward W. Dempsey is in Washington, D. C. as special assistant to the Secretary of Health, Education and Welfare. She is the first woman named officially to an administrative post in the School of Medicine.

New officers were elected and seven student awards given for excellence in scholarship at a meeting of the Washington University Medical Society.

Dr. Sam L. Clark, Jr., associate professor of anatomy, was elected president of the society, which is composed of all medical faculty and students. Dr. Gerald T. Perkoff, associate professor of medicine, was named vice president, and Dr. Adolph Cohen, research assistant professor of anatomy and ophthalmology, was named secretary.

Two students each from the sophomore, junior and senior classes were awarded either the Dr. Richard Brookings Medical School prize or the Dr. Robert Carter Medical School prize.

A portrait of Dr. Edwin F. Gildea, former chairman of the department of psychiatry, was presented to the department during a special ceremony October 20. The portrait is a gift from Dr. Gildea's friends and colleagues in recognition of his service to the department. The former chairman, who is now Wallace Renard Professor of Psychiatry, is seen above with the present chairman, Dr. Eli Robins.

Quote of Note

. . . physicians in America can relinquish their defensive position, which we must acknowledge we have had for the last decade . . . we can now at a national and state level assume an offensive stature predicated on knowledge as a result of study, and strength as a result of organization.

One of the things we decry most in these United States is the creation of a strong centralized, paternalistic, bureaucratic national government, and a parallel creation of our state administration. It should come as no surprise, and I tell you now, it becomes necessary to fight fire with fire. However, we need not apologize nor alter the creation of a strong centralized medical organization as long as the leadership shall be selected by the Democratic process and as long as that leadership is responsive to and responsible to its entire membership and to component societies. It is in the honoring of the democratic process that our medical organization differs from centralized government. So long as we can retain the central theme of better patient care as our only goal, who dare fault us for becoming strong and for taking the offensive?

Robert B. Hunter, M.D.

Address as Outgoing President of Washington State Medical Association. Seattle, Wash. Sept. 16, 1964.

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Missouri Medicine in Review

FORTY YEARS AGO

The Hospital and Health Board of Kansas City has appointed Dr. John L. Lavan as city physician. Dr. Lavan also was recently appointed manager of the Kansas City Blues baseball team. He is a member of St. Louis Medical Society but has taken a transfer to the Jackson County Medical Society.—The Masons of Kansas City have begun a movement to establish a permanent memorial in honor of the late Dr. Wm. F. Kuhn, who was at the time of his death General Grand High Priest of the General Grand Chapter of the Royal Arch Masons of the United States. Dr. Kuhn was the only Missourian ever to occupy that position.—The California State Board of Examiners have issued a state warrant for the arrest of Dr. John R. Brinkley, the Milford, Kansas "goat gland" specialist, in connection with his activities in a "diploma mill" scandal.—Dr. A. V. Hill, professor of physiology at the University of London, delivered two illustrated lectures at Washington University Medical School recently. Dr. Hill, who was awarded the 1922 Nobel prize for his work in the discovery of the mechanism of muscular contraction, was introduced by Dr. Joseph Erlanger, head of the department of physiology.—Dr. Scott P. Child, president of the Jackson County Medical Society, suggests that Kansas City take advantage of the free health survey offered by the government.—The Callaway County Medical Society met in monthly session at Fulton, at the home of the president, Dr. R. N. Crews. A social hour and an elegant supper were enjoyed by Drs. Crews, A. D. Ferguson, J. B. McCubbin, J. G. Bruce, H. I. Owen, W. J. Bryan, H. R. Hill, M. O. Biggs, J. Y. Hume and M. Yates. Routine business and the scientific program followed.

TWENTY-FIVE YEARS AGO

The year 1939 is the century milestone along the road of progress, for the University of Missouri. In 1839 the State of Missouri was still experiencing the growing pains of its young statehood. When it was decided to locate the University centrally in the state, feverish bidding was made by the central counties. Boone County offered the largest bonus ($117,500) for location at Columbia, the county seat. This location was selected on June 24, 1839, and the cornerstone of the first building was laid July 4, 1840. The first president, John H. Lathrop, served eight years, and the first medical school of the University was established under him.—Dr. Edward A. Doisy, St. Louis, was the 1939 recipient of the St. Louis Award of $1,000. The award is the gift of an anonymous donor. Dr. Doisy is the seventh recipient and he was honored for his discovery of vitamin K.—The St. Francois-Iron-Madison-Washington-Reynolds County Medical Society met at the County Courthouse in Farmington, September 29, at 7:30 p.m. Dr. N. W. Hawkins, Bonne Terre, president, presided.

TEN YEARS AGO

The budget request for operation of Missouri University's four year medical school for the 1955-57 biennium was $4,750,760.—President-elect of the Central Association of Obstetricians and Gynecologists is Harold L. Gainey, M.D., Kansas City. —Lawrence Epple, M.D., Mexico, has been ordered to active duty in the Navy. His wife, Kathryn Epple, M.D., will remain in Mexico and continue her practice of pediatrics.—Marysville's only active physician, James H. Sweiger, M.D., has enlisted in the Army, leaving that city without a doctor. —The Southwest Missouri Chapter of the American College of Surgeons elected F. T. H'Doubler, Sr., M.D., president and Durward G. Hall, M.D., vice-president. Both men are from Springfield.—At Windsor, a community reception was held in honor of R. J. Jennings, M.D., who has completed fifty years in the practice of medicine.

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